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JANUARY 2012 | CONSUMERREPORTS.ORG

# ConsumerReports®

## Best & Worst Cell Phones & Plans

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YOUR  
PASSWORDS**  
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78 phones and 12 carriers
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Top 10 tips  
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**PLUS** Cell phone radiation: New research

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## This issue by the numbers

### What you'll save

**\$1,300**

Choose a Whirlpool Gold GU2300XTV dishwasher, not the lower-rated Kenmore Elite 1404, and save this much.

**\$175**

Buy **fish-oil pills** from Spring Valley (Walmart) instead of Nature's Way and save this much per year.

**\$2.09**

Hungry for a **chicken florentine dinner**? Save this much by buying Birds Eye Voila instead of Bertolli.

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**93**

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## Who we are

### Consumer Reports

is the world's largest independent consumer-product-testing organization. We also survey millions of consumers about their experiences with products and services. We're based in Yonkers, N.Y., and are a nonprofit organization.

**What we do** We buy all the products we rate.

**What we don't do** We don't accept paid advertising; we get our money mainly through subscriptions and donations. We don't accept free test samples from manufacturers. And we don't allow our name or content to be used for any promotional purposes.

**How to reach us** Write to us at Consumer Reports, 101 Truman Ave., Yonkers, NY 10703-1057, attn: Customer Service.

- To send a letter to the editor, go to [ConsumerReports.org/lettertoeditor](http://ConsumerReports.org/lettertoeditor).
- For news tips and story ideas, go to [ConsumerReports.org/tips](http://ConsumerReports.org/tips).
- E-mail submissions for Selling It to [SellingIt@cro.consumer.org](mailto:SellingIt@cro.consumer.org).
- For subscription information, go to [ConsumerReports.org/magazine](http://ConsumerReports.org/magazine) or call 800-666-5261. See page 60 for more details.

**Ratings** We rate products using these symbols:

● Excellent ● Very good ○ Good ● Fair ● Poor



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



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



**Recommended car** These tested well, are reliable, and performed adequately if crash-tested or included in a federal rollover test.



**Don't Buy** We label products with this icon when we judge them to be safety risks or to have serious performance problems.



## Heart of the matter

"Extinguish Holiday Heartburn" (Health, November 2011) is timely and interesting.

I'm surprised, though, that you didn't mention sodium bicarbonate—old-fashioned baking soda.

**Gordon Trotter**  
Columbia, MD

*Sodium bicarbonate isn't the best antacid because of its side effects (burping and flatulence) and sodium levels.*



## The business of medicine

Through the years I've learned to rely on CONSUMER REPORTS for accurate reporting and attention to detail. But the image in the health reform time line ("Health Insurance," November 2011) should have been the staff of Asclepius (the symbol of medicine), not the caduceus of Hermes (the symbol of commerce). The commerce symbol is inappropriate except in an ironic sense.

**Howard Stern** Millwood, NY

## Something to digest

In your article "Go with Your Gut: Top-Rated Yogurts" (Up Front, July 2011), the important point when it comes to probiotics is: More is not necessarily better. When choosing a probiotic, choose first a product with positive human studies documenting health benefits, and then be sure the dose delivered in the product matches the effective dose.

**Mary Ellen Sanders, Ph.D.**

Executive Director, International Scientific Association for Probiotics and Prebiotics

*It is important to choose a probiotic that has been well studied and whose effective dose has been determined, as we indicated in the article. Probiotics strains are often proprietary, so we measured the most commonly used and studied probiotic genera of bacteria, lactobacillus and bifidobacterium.*

## Correction

In "Health Insurance" (November 2011) we incorrectly stated that UnitedHealthcare didn't have any plans in the top 100 private plans. Oxford Health Plans, a UnitedHealthcare subsidiary, has three: Oxford Health Plans (Connecticut), 92nd; Oxford Health Plans of New York, 97th; and Oxford Health Insurance—New York, 99th.

SEND YOUR LETTERS TO [WWW.CONSUMERREPORTS.ORG/LETTERTOEDITOR](http://WWW.CONSUMERREPORTS.ORG/LETTERTOEDITOR).

## Ask our experts

**I keep reading that programmable thermostats will save energy, but I have also heard that they don't work with heat pumps. Do they?**

**R. Bruce Golden** Virginia Beach, VA

Some do, but using a programmable thermostat with a heat-pump system could end up costing you more in energy. Because most heat pumps extract heat from the air, their output is limited, especially when outdoor temperatures dip. Most rely on electric heat as a backup for that reason. A setback thermostat might trigger the electric portion of the heat to help bring indoor temperatures up to comfortable levels in the morning or when you get home from work, using more expensive electricity in the process.

**Which expiration date do you believe on an Rx drug: the date on the container (which may have a distant expiration date) or the date on the druggist's label, typically a year from when the prescription was filled?**

**John Ngai** Rego Park, NY

Pay attention to the expiration date on the prescription-drug label, which takes into account home storage conditions, drug type, how often the container is opened, etc. (The date on the container is the last date pharmacists can dispense the drug.) Many drugs used past their expiration date will

simply lose potency, but others cause bigger problems. Tetracycline, for example, degrades into a substance that can cause kidney disease.

**How much better is an excellent snow-traction rating for a winter tire than an excellent snow traction rating for an all-season tire?**

**Elliott Halpern** Martinez, CA

Most snow tires are better than even the best performing all-season tires in snow. Snow traction and other Ratings are comparable within tire categories. Those categories include all-season car tires, ultra-high-performance car tires, and truck tires.

**The new passport for my underage son has the wrong middle name on it. May I simply draw a line through the wrong information?**

**Katherine Mickel**

Stone Mountain, GA

No. The State Department has instructions for correcting a passport at [travel.state.gov/passport/correcting/correcting\\_2654.html](http://travel.state.gov/passport/correcting/correcting_2654.html). Click on Form DS-5504, fill it out, and return it with a certified birth certificate (which you'll get back) and the incorrect passport. If the passport is more than a year old, you might have to use Form DS-82.

SEND YOUR QUESTIONS TO [WWW.CONSUMERREPORTS.ORG/ASKOUREXPERTS](http://WWW.CONSUMERREPORTS.ORG/ASKOUREXPERTS).



**GRIP AND GRIN** Winter tires provide maximum traction on ice and snow.

This page highlights efforts of Consumers Union, the policy and action arm of Consumer Reports, to improve the marketplace. Here's some of what we're focused on now.

## FROM OUR PRESIDENT

### Home improvements



This new year brings with it a few changes:

**Who.** The parent organization and publisher of CONSUMER REPORTS has been, for 75 years, Consumers Union. But we're much better

known as Consumer Reports, with more than 80 percent of adults in the U.S. aware of it, so we've decided to make the change official; we'll use that as our organization's name from now on. We'll continue our advocacy efforts as Consumers Union, which is widely recognized and respected by policy makers at the federal and state levels.

**Where.** In May 2007, after we withdrew an article on infant car seats that was based on erroneous crash-test data, we said we'd tell you whenever we use an outside lab. We use other labs for a small portion of tests. Over the past five years, we've enhanced our quality control so that oversight of the testing—wherever it is taking place—adheres to our high standards of rigor and accuracy. For that reason, moving forward, we'll tell you when we use an outside lab only when we believe it gives important context—and save the space for information that is more directly useful to you.

**How.** Digitally! The Consumer Reports Magazine iPad Edition app on iTunes is now available at no extra cost for CONSUMER REPORTS print subscribers. Just download the free app and follow the instructions. Anyone else can buy single issues or a discounted subscription. And look for digital editions of our magazines on Barnesandnoble.com, Zinio.com, and soon on Amazon.com. We've launched four new product-category apps for Android and iPhone platforms, and Hospital Ratings and Eco-Labels apps for the iPhone. Happy mobile New Year.

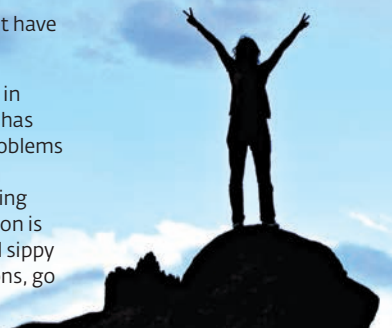
*Jim Guest*  
JIM GUEST  
President

## CONSUMER VICTORY

**THE WIN** A new state law bans the chemical bisphenol A (BPA) from baby bottles and sippy cups.

**WHERE** California, which joins 10 other states that have similar laws in place.

**WHAT'S IN IT FOR YOU** BPA, a common additive in hard plastics, is a known endocrine disruptor that has been linked to neurological and developmental problems in children. Consumers in 11 states will be able to confidently buy baby bottles and sippy cups knowing they are BPA free. The Food and Drug Administration is considering banning BPA from all baby bottles and sippy cups in the U.S. To see which states have restrictions, go to [www.ConsumersUnion.org/BPAstatelaws](http://www.ConsumersUnion.org/BPAstatelaws).



## QUOTABLE

### 'We heard you. No debit card fees.'

**-BANK OF AMERICA'S WEBSITE** Nov. 1, 2011. Consumer backlash was fierce after several banks announced a \$5 monthly fee to use a debit card. As soon as the policy was announced, Consumers Union sent letters of objection to the most powerful banks, called for a congressional investigation, and worked with consumer activists to contact Bank of America's CEO, leading to more than 38,000 e-mails and 7,000 stories.

## WINNERS CIRCLE

### Fighting financial abuses

Economic Fairness Oregon, a dynamic nonprofit, was one of the five finalists for Consumers Union's first Excellence in Advocacy Award. Director Angela Martin says the small team has worked for the passage of laws that crack down on predatory payday lending, protect homeowners facing foreclosure, and ensure that potential employees aren't discriminated against because of their credit scores.

They engage consumers in the legislative and advocacy processes by running community meetings, organizing citizen activists to testify before policy makers, and drawing the interest of local and national media to highlight the issues. By combining policy solutions



**FAIR PLAY** (From left) Mari Borden, Saadia McConville, and Angela Martin work for economic security for Oregonians.

and issue advocacy, the group is able to profile the problems consumers are facing and offer the steps needed to help solve them.

We featured the award winner, the Empowered Patient Coalition, last month. See more about all finalists at [www.ConsumerReports.org/consumeraward](http://www.ConsumerReports.org/consumeraward).

# \$18,000

► That's the cell-phone bill of a Massachusetts man who exceeded his data plan's limit without warning. No longer. In October, wireless companies agreed to send free alerts to customers before they go over their limits on calls, texts, and data. The Federal Communications Commission credited Consumers Union for its leadership in pushing for the reform.



# Up front

News, trends, advice

## Best paper towels

When it comes to slurping up spills, some paper towels really do “bring it,” which is Bounty’s challenge to the messy among us. Best of the 23 we tested are plain Bounty and Bounty Extra Soft. But all Bounty products aren’t equal: A third version, Bounty Basic, absorbed less than its brandmates.

We tested absorption (the weight of water that a 25-square-inch piece of paper towel could hold) and scrubbing (the number of strokes needed to tear a section of wet paper towel rubbed over a mildly abrasive surface). The best at scrubbing survived five to 10 times as many scrubbing strokes as those that tore most easily. We also assessed wet strength (force required to pull a section of wet towel apart).

Prices ranged widely, from \$1.46 to \$5.12 per 100 square feet, but you needn’t pay top dollar. Great Value (Walmart) cost \$1.82 per 100 square feet and was very good; Earth Friendly Products, one of the priciest, was lowest rated of all.

**Bottom line.** Try one of the three recommended products. If you go through paper towels like mad, and top performance isn’t paramount, consider Great Value or Kirkland Signature, which were very good and are cheaper than most.

### ▶ DID YOU KNOW?

There are few or no governmental regulations for many of the “green” claims on paper towels, but “recycled” claims have some merit. Look for a high percentage of post-consumer recycled content.

## Ratings

In performance order.



- Excellent
- Very good
- Good
- Fair
- Poor

☒ Recommended

Rec.	Product	Size	Cost/100 sq. ft. <sup>1</sup>	Overall score	Absorption	Scrubbing	Wet strength
		Roll (sq. ft.)	Sheet (in.)				
				0 100 P   F   G   V   E			
<input checked="" type="checkbox"/>	<b>Bounty</b>	41.	10x11	\$2.38	<b>90</b>	●	●
<input checked="" type="checkbox"/>	<b>Bounty Extra Soft</b>	47	10x11	2.82	<b>84</b>	●	●
<input checked="" type="checkbox"/>	<b>Up &amp; Up (Target) East <sup>2</sup></b>	58	6x11	2.16	<b>81</b>	●	●
	<b>Brawny</b>	47	6x11	3.20	<b>80</b>	●	●
	<b>CVS Big Quilts</b>	59	6x11	4.24	<b>77</b>	●	●
	<b>Great Value (Walmart)</b>	47	11x11	1.82	<b>77</b>	●	●
	<b>Viva Kleenex</b>	42	6x11	5.12	<b>76</b>	●	○
	<b>Walgreens Ultra</b>	59	6x11	3.39	<b>75</b>	●	●
	<b>Kirkland Signature (Costco) East <sup>2</sup></b>	96	14x11	1.47	<b>75</b>	●	●
	<b>Kirkland Signature (Costco) West <sup>2</sup></b>	86	14x11	1.46	<b>71</b>	●	●
	<b>Up &amp; Up (Target) West <sup>2</sup></b>	58	6x11	2.16	<b>69</b>	●	●
	<b>Bounty Basic</b>	38	10x11	1.90	<b>66</b>	○	●
	<b>White Cloud Green Earth (Walmart)</b>	65	5x11	2.27	<b>54</b>	○	●
	<b>Seventh Generation</b>	58	5x11	2.89	<b>50</b>	○	○
	<b>Sparkle</b>	40	11x11	1.66	<b>50</b>	●	●
	<b>Scott</b>	57	7x11	1.70	<b>48</b>	●	●
	<b>Marcal Small Steps</b>	38	9x11	2.56	<b>42</b>	●	●
	<b>CVS Earth Essentials</b>	38	9x11	2.31	<b>39</b>	●	○
	<b>Scott Naturals</b>	57	7x11	1.83	<b>38</b>	●	●
	<b>Green Forest</b>	44	6x11	2.85	<b>34</b>	●	○
	<b>365 Everyday Value (Whole Foods)</b>	44	9x11	2.00	<b>33</b>	●	○
	<b>Trader Joe's</b>	67	11x11	1.98	<b>33</b>	○	○
	<b>Earth Friendly Products</b>	55	8x11	4.75	<b>26</b>	○	○

<sup>1</sup> Usually based on six or eight rolls per package. CVS Big Quilts, Earth Friendly Products, Green Forest, Trader Joe's, Viva, Walgreens, and White Cloud based on one, two, or three rolls. Kirkland Signature based on 12 rolls. <sup>2</sup> East and West versions are from different suppliers.



**LOOKIN' GOOD** These are tasty and healthful. Shown, one serving of each.

## Quick, tasty dinners

We've come a long way from the iconic TV dinner of rubbery turkey, tinny-tasting mashed potatoes, and gluey gravy. The best of the 19 chicken- or shrimp-based meals we tested for this report are so tasty that you might forget they came from a bag in the freezer aisle.

Two of the tastiest, Contessa Sesame Chicken and Birds Eye Voila Chicken Florentine, also have far less fat and sodium than most others.

In all, nine meals taste very good, with moist, tender chicken or shrimp; fresh-tasting,

crisp vegetables; and al dente pasta or rice in flavorful sauce. Drawbacks among lower-rated products include soggy coatings or herbs that taste dehydrated.

We found that you can't just shop by brand. Contessa's Sesame Chicken is the best Asian chicken dinner we tested, but its MicroSteam Chicken Florentine is the lowest-rated Italian chicken dinner. And although P.F. Chang's makes a very good Shrimp Lo Mein, its Sweet and Sour Chicken is just OK.

You'll have to choose carefully to avoid loads of fat and sodium. Bertolli Chicken Florentine &

Farfalle, for example, has 31 grams of fat per serving (17 of those are saturated fat) and 1,070 milligrams of sodium (the recommended daily limit is 2,300 milligrams). On the plus side, most of the meals have 3 to 5 grams of fiber, and servings weigh about 8 to 12 ounces, so most aren't skimpy. (Most packages contain 2 or 2.5 servings; Birds Eye Chicken Florentine has 3.)

The meals usually take 6 to 17 minutes to prepare. We cooked them as recommended (on the stove, except Contessa MicroSteam chicken, which requires microwaving). Some meals are simpler to make than others. With P.F. Chang's and Bertolli, for example, you just empty the contents into a pan and heat. Others require water or oil, or have you heat rice or pasta separately.

Prices per package range from \$3.84 to \$8.09. Per serving, meals cost \$1.28 to \$4.05, definitely cheaper than takeout.

**Bottom line.** We recommend Birds Eye Voila Chicken Florentine and Contessa Sesame Chicken because those meals are very tasty and very nutritious. They cost just \$1.28 and \$2.51, respectively, per serving.

The Birds Eye has tender chicken with penne and fresh-tasting vegetables in pesto sauce; the Contessa has tender grilled chicken with crisp vegetables and al dente brown rice in sesame sauce.

Among the shrimp dinners, Wanchai Ferry and Romano's Macaroni Grill have large shrimp; the rest have ... yes, small shrimp.

## Ratings Frozen meals

In taste order, within types.

Rec.	Product	Nutrition	Per serving			
			Calories	Fat (g)	Sodium (mg)	Cost
CHICKEN (ASIAN)						
VERY GOOD						
✓	Contessa Sesame Chicken	⊖	280	5	750	\$2.51
	P.F. Chang's Home Menu Orange Chicken	○	450	16	1,030	4.05
GOOD						
	Wanchai Ferry Orange Chicken	○	610	22	1,180	3.52
	Wanchai Ferry Sweet & Sour Chicken	○	590	21	850	3.52
	Birds Eye Voila Teriyaki Chicken	○	200	1.5	890	1.64
	P.F. Chang's Home Menu Sweet & Sour Chicken	○	410	10	780	4.02
CHICKEN (ITALIAN)						
VERY GOOD						
	Bertolli Chicken Florentine & Farfalle	○	570	31	1,070	3.37
✓	Birds Eye Voila Chicken Florentine	⊖	230	6	590	1.28
GOOD						
	Stouffer's Easy Express Chicken Alfredo Skillet	⊖	400	10	970	2.39
	Stouffer's Easy Express Garlic Chicken Skillet	⊖	330	6	990	2.35

👍 CR Best Buy    🍷 Excellent    🍷 Very good    ○ Good    🍷 Fair    🍷 Poor						
Rec.	Product	Nutrition	Per serving			
			Calories	Fat (g)	Sodium (mg)	Cost
CHICKEN (ITALIAN) <i>continued</i>						
	Romano's Macaroni Grill Grilled Chicken Florentine	○	560	19	1,270	\$3.53
	Contessa MicroSteam Chicken Florentine	🍷	410	17	550	2.49
SHRIMP (ASIAN)						
VERY GOOD						
	Wanchai Ferry Shrimp Lo Mein	○	600	18	1,600	3.58
	P.F. Chang's Home Menu Shrimp Lo Mein	○	360	12	1,550	4.05
GOOD						
	P.F. Chang's Home Menu Shrimp in a Garlic Sauce	○	290	9	1,350	4.00
SHRIMP (ITALIAN)						
VERY GOOD						
	Bertolli Shrimp, Asparagus & Penne	○	420	16	1,000	3.35
	Bertolli Shrimp Scampi & Linguine	○	540	24	850	3.39
	Romano's Macaroni Grill Roasted Garlic Shrimp Scampi	○	410	16	1,090	3.45
GOOD						
	Contessa Shrimp Primavera	○	410	17	900	2.70



# Acne treatments come out a wash

**“Your wait for clear skin can be over!”** says the website for Proactiv, which is claimed to be “America’s #1 Acne Treatment.” But AcneFree’s maker claims that its product is “America’s best selling acne system in stores” and “clears skin 24/7.”

We tested those products and others to see what might help teenagers (and millions of adults) with acne, which occurs when bacteria is trapped in clogged pores. All the products helped somewhat, but some cost far more than others.

## ▣ Topical treatments

AcneFree and Proactiv consist of wash, toner, and lotion. We also tested Oxy Maximum, a face wash. The wash in AcneFree and Proactiv is 2.5 percent benzoyl peroxide, but AcneFree’s lotion is 3.7 percent and Proactiv’s is 2.5 percent. Oxy Maximum wash is 10 percent benzoyl peroxide.

We gave 83 volunteers with acne one of the products to use. Results were similar whatever the product: After eight weeks, acne was never wiped out completely, but in half to two-thirds of volunteers, the number of blemishes was reduced by an average of about 40 percent. Although



the difference in acne reduction among the brands wasn’t significant, the difference in price was. Oxy Maximum costs \$5 for 6 ounces, which lasts two to three months. A Proactiv kit, which lasts about a month, costs \$20 when bought from the company’s website. And an AcneFree kit, which lasts about two months, costs \$20.

## ▣ Zappers

We tested Zeno Hot Spot and No! No! Skin. Both are claimed to use light and/or heat to reduce or eliminate red, inflamed acne blemishes (not whiteheads or blackheads) in 24 hours. We had 26 volunteers test each device on one side of their face for two days. Both devices shrank most acne lesions but eliminated only about 13 percent of them. Zeno costs \$40 for 80 uses, after which it is tossed out; No! No! Skin costs \$180, but it’s at least rechargeable.



**Bottom line.** Start by trying a benzoyl-peroxide treatment, and shop by price. Almost all of our volunteers were satisfied enough with

the topical product they tried to say they would buy it. Note that benzoyl peroxide can irritate sensitive skin, so some people might want to consult a dermatologist before using it.

Zappers are pricey but might come in handy as a quick fix—for a bride or groom approaching the big day, for instance.

Whatever the treatment used, acne sufferers need to be patient: Outbreaks are cyclical, and blemishes might get worse before they get better.

## ▣ CHECK OUT OUR VIDEO

Using your smart phone, download the ShopSavvy or the RedLaser app, then scan the code at right. Or go to [www.ConsumerReports.org/Proactiv](http://www.ConsumerReports.org/Proactiv).



## A better SunChips bag?

Frito-Lay scrapped its SunChips Original bag last year (too noisy) but says that the newer bag, like the old, is “100% compostable.” We decided that a retest was in order. On the bag’s back are the words “designed to compost in about 14 weeks in a hot, active home or industrial compost pile.” In tiny type on the bag’s base: “This package is suitable for industrial composting.”

Most people don’t have access to an industrial compost pile, so we put a SunChips bag in

a typical home pile of grass clippings, wood chips, leaves, and starter dirt, and kept it there for 14 weeks, adding compost and watering as needed. We also measured noise while crinkling the newer bag, the older bag, and a Tostitos bag.

**Bottom line.** The bag barely changed in the compost pile. (A very hot compost pile would probably be more effective.) The newer bag is quieter than the previous version, but it’s still louder than a Tostitos bag.



New bag

3 months later

**FRATERNAL TWINS** After burial in our home compost pile, the bag on the right looked almost like new.



# Wine winners

Our experts conducted blind taste tests of 39 bottles costing \$3 to \$37 and found 15 to recommend. Those include seven CR Best Buys for \$7 to \$11, far less than a few \$20-plus wines that didn't make our cut.

**Cabernet sauvignon.** The "cabs" in our Select Ratings have a complex balance of dark berry and wood flavors and vegetal and herbaceous notes. Most also have good "structure," a pleasing feel in the mouth imparted by acids and tannins. You can drink them now, but they might improve over the next two to three years.

Of the CR Best Buy cabs, Columbia Crest Grand Estates, has black fruit balanced by rich wood; Trackers Crossing has rich, jammy fruit with wood a minor player; and Cherrywood Cellars has loads of fruit and woody tannins.

Drink cabernets with earthy fare such as mushrooms, roasted poultry, and red-meat dishes, whose fats soften the tannins.

**Chardonnay.** Most we've listed are fruity or woody/buttery. They're best consumed within a year or two.

Among the CR Best Buys, Bogle's strong acidity boosts a nice fruit assortment balanced by toasty oak flavors; Snoqualmie has a good balance among ripe fruit, butter, and wood flavors, and is a touch sweeter than most; Columbia Crest Grand Estates is a big gulp of oak balanced by citrus; Kirkland Signature is simple but with decent fruit and a bit of wood. Simple tart, fruity chardonnays pair well with sushi and finger foods; those with heavier wood notes go with rich, creamy, or smoky dishes. (Think fettuccine alfredo.)

**Bottom line.** If you can't find the tested vintage, choose another recent one, which we've found should be fairly similar.



## THE ALSO-RANS

These tend to be less balanced or less intense, or have off-notes. In alphabetical order:

### Cabernet sauvignon

Beringer Knights Valley, Bogle, Buehler, Casa Lapostolle, Charles Shaw (Trader Joe's), Chateau Ste. Jean, Ferrari Carano Alexander Valley, Marques de Casa Concha, Mollydooker The Maitre D, BR Cohn Silver Label, Wine Cube (Target)

### Chardonnay

Bernardus, Chalone, Charles Shaw (Trader Joe's), Chateau Ste. Michelle, Frei Brothers, Greg Norman, Marques de Casa Concha, Rombauer, Stag's Leap, Trackers Crossing 365 (Whole Foods), Wine Cube (Target), ZD

## Select Ratings

Best choices from our tests of 39 products.

☒ CR Best Buy

☒ Recommended

Rec.	Product	Price
<b>CABERNET SAUVIGNON</b>		
<b>VERY GOOD</b>		
<input checked="" type="checkbox"/>	Crios 2009 (Argentina)	\$13
<input checked="" type="checkbox"/>	Columbia Crest Grand Estates 2008 (Washington)	11
<input checked="" type="checkbox"/>	Chateau Ste. Michelle Indian Wells 2009 (Washington)	16
<input checked="" type="checkbox"/>	Columbia Crest H3 2008 (Washington)	14
<input checked="" type="checkbox"/>	Trackers Crossing 365 (Whole Foods) 2009 (Australia)	7
<input checked="" type="checkbox"/>	Louis Martini Sonoma 2008 (California)	16
<input checked="" type="checkbox"/>	Catena 2008 (Argentina)	18
<input checked="" type="checkbox"/>	Cherrywood Cellars (7-Eleven)	8

Rec.	Product	Price
<b>CHARDONNAY</b>		
<b>EXCELLENT</b>		
<input checked="" type="checkbox"/>	Chalk Hill 2009 (California)	\$37
<b>VERY GOOD</b>		
<input checked="" type="checkbox"/>	Bogle 2009 (California)	10
<input checked="" type="checkbox"/>	Snoqualmie 2009 (Washington)	10
<input checked="" type="checkbox"/>	Newton 2009 (California)	19
<input checked="" type="checkbox"/>	Souverain 2009 (California)	13
<input checked="" type="checkbox"/>	Columbia Crest Grand Estates 2009 (Washington)	10
<input checked="" type="checkbox"/>	Kirkland Signature (Costco) Sonoma 2009 (California)	8

## Is Wendy's new Dave's a better burger?



To assess Dave's Hot 'N Juicy ¼-Lb. Single, claimed to be "Wendy's thickest hottest and juiciest hamburger ever," we sent two trained tasters to three Wendy's restaurants near our Yonkers, N.Y., headquarters and one trained taster to three Wendy's restaurants in New England. They paid from \$3.69 to \$4.29 per burger.

**Mm-mm or ho-hum?** The burger was pan-seared, fairly beefy, tender, and thicker than before, and it filled most of the buttery-tasting, toasted bun. But the beef wasn't especially juicy and sometimes had a fatty flavor.

The toppings—tomato slice, red onion, iceberg lettuce, pickle, ketchup, mayo, and two slices of American cheese—weren't always "premium," as advertised. In some locations, the lettuce was wilted or the tomato unripe. The parts blended well, but as you bite, pickles, onions, and lettuce tend to slide out, along with drippy ketchup and mayo. If you eat in the restaurant, the burger usually comes in a wrapper open at one end, minimizing mess.

**Bottom line.** Dave's is tasty enough but no better than Wendy's former Classic Single with Everything, which we rated Very Good in 2001.





# Fish-oil pills vs. claims

**Americans are buying** more fish-oil supplements than ever, but in our lab tests of 15 top-selling brands, six fell a bit short.

We tested three lots of each brand, bought in New York-area stores. All had their labeled amount of EPA and DHA, omega-3 fatty acids that can reduce the risk of heart attacks and strokes. And none exceeded limits for lead, mercury, dioxins, or polychlorinated biphenyls (PCBs) set by the U.S. Pharmacopeia (USP), a nongovernmental standard-setting group, or by the European Union.

But we found total PCBs in amounts that could require warning labels under California's Proposition 65, a consumer right-to-know law, in one sample of the CVS, GNC, and Sundown products, and in two samples of Nature's Bounty.

Most tested pills are claimed to be "purified" or "free" of PCBs, mercury, or other contaminants, claims that have no specific regulatory definition, the Food and Drug Administration says. The agency has taken no enforcement action against any omega-3 maker over PCBs or other contaminants, an FDA spokeswoman said, because it has seen no public-health risk.

We also found elevated levels of compounds that indicate spoilage in the Nordic Naturals pills. And two samples of Kirkland Signature failed the USP's disintegration test for pills with enteric coatings (designed to prevent fishy aftertaste): Their coating could break up in the stomach, not in the small intestine as intended. Oddly, that was one of few tested products labeled "USP Verified," which indicates that the USP has tested and verified the claimed ingredients, potency, and manufacturing process.

**Bottom line.** Most people can get enough omega-3s by eating fatty fish—such as salmon and sardines, which are also low in mercury—at least twice a week. But people who have coronary heart disease require about a gram a day of those

fatty acids, an amount that often requires taking a supplement. Check with a doctor before taking omega-3 pills because they can interact with some medications. Choose one listed under "met quality standards." Those cost anywhere from 17 to 64 cents a day for 1 gram of EPA and DHA combined, the amount the American Heart Association recommends for people with coronary heart disease.

## Ratings

In cost order, within groups.

Product <sup>①</sup>	Count	Coated	Cost <sup>②</sup>	
			Day	Year

### MET QUALITY STANDARDS

<b>Spring Valley</b> (Walmart)	200		17¢	\$ 60
<b>Finest Natural</b> (Walgreens)	200		23	82
<b>Walgreens Concentrate</b>	60		25	91
<b>Barlean's Organic Oils EPA-DHA</b>	250		26	96
<b>Nature Made 1,200 mg</b>	180		28	103
<b>The Vitamin Shoppe Meg-3 EPA-DHA</b>	100		32	117
<b>Carlson Super Omega-3 Gems</b>	100		46	168
<b>Norwegian Gold Ultimate Critical Omega</b>	60	•	47	170
<b>Nature's Way Fisol <sup>③</sup></b>	180	•	64	235

### DIDN'T MEET ENTERIC-COATING CLAIM

<b>Kirkland Signature Enteric 1200 (Costco)</b>	180	•	9	31
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### SPOILAGE INDICATED

<b>Nordic Naturals Ultimate Omega</b>	180		67	243
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### 1 OR 2 SAMPLES ABOVE CALIF. TOTAL PCB LIMIT

<b>CVS Natural</b>	250		19	70
<b>Sundown Naturals</b>	200		29	104
<b>Nature's Bounty Odorless</b>	100	•	36	131
<b>GNC Triple Organic</b>	60	•	37	134

<sup>①</sup> 1,000 mg of fish oil unless otherwise noted. <sup>②</sup> Based on 1,000 mg of omega-3 (usually two or three capsules).

<sup>③</sup> Reformulated after our tests.

## CLAIM CHECK

## Mats to melt a snowy sidewalk

**The claim.** Plug a HeatTrak mat into an outlet (an outdoor one is most convenient), and it "will prevent snow and ice accumulation on walkways and stairs around your home." The mat measures 20x60 inches and can be daisy-chained to as many as four other mats. Each mat costs \$120. The first mat requires a power unit costing \$30; added mats require \$13 extension cords. Smaller mats for stair treads cost \$50 each. For \$350, you can buy the 24x60-inch Warmtrax, a heavier-duty melting mat. (Bigger sizes cost more.) It includes a GFCI plug and has a deeper pattern for extra traction. Both mats are sold online.

**The check.** We set the Warmtrax mat outside and waited for snow. The weather didn't cooperate fully, so we sprinkled old snow onto the mat, simulating use after a storm. (Instructions say that use before and during snowfall is preferable.) We also placed Warmtrax and HeatTrak in separate chest freezers, piled a layer of ice cubes atop each, and measured their power use and melting effectiveness.

**Bottom line.** Let it snow. Both mats should remove falling or fallen snow and help with freezing rain. One caveat: Heavy snow could melt and flow off the mats, then refreeze. Both mats use about 300 watts of electricity while plugged in, for a cost of about 3.5 cents per hour.



**A SNOWLESS PATH**  
HeatTrak is sold in a stair size and in a bigger version.



# Refinance your mortgage (again)?

**S**OME 58 PERCENT of homeowners who have mortgages—that's about 28 million households—pay interest rates that are higher than today's bargain rates. Many could save thousands by refinancing. Are you one of them?

Trading in a higher-rate mortgage for a cheaper one has become almost ritual in the past two decades. Some homeowners refinanced several times as interest rates on 30-year fixed mortgages went from around 10 percent in the early 1990s to about 4 percent in early November, when rates were at their lowest levels in 50 years.

## Long-term savings

That has created yet another opportunity to cut your monthly mortgage payments or accelerate your home's payoff by refinancing into a shorter-term loan, which can slash your total interest costs.

How much can you gain from refinancing? If you took out a 30-year, \$200,000, 6.7 percent mortgage five years ago, your monthly payment is almost \$1,300. Refinance the \$188,000 balance with a 25-year, 4 percent mortgage, and your payment would drop by \$300 per month, saving you \$90,000 in finance charges over 25 years.

Rates on 15-year mortgages are even lower, averaging 3.4 percent in early November. Shortening the loan term often results in a higher monthly payment. If you refinanced the above five-year-old loan to a 15-year, 3.3 percent mortgage, your monthly payment would go up by about \$30. But by paying off your loan 10 years sooner, you'd save \$149,000 in interest.

You'll get the biggest savings from refi-



nancing early in your loan term, but if you can slash your rate, you can still save even if you have less than 10 years left on your mortgage. For example, if you have six years left on a 15-year, 5.6 percent mortgage written in 2002 and you refinanced to a 15-year, 3.6 percent mortgage, you'd cut your monthly payment by \$922. You'd also extend your mortgage by six years, which would increase your total interest costs by \$11,600. But if you paid an additional \$850 each month toward your principal, you'd pay off the new loan in six years and save about \$6,800 in interest.

To crunch the numbers on your own specifics, try the calculator at [www.hsh.com/refinance-calculator](http://www.hsh.com/refinance-calculator). The calculator accounts for closing costs, about 2 percent of the principal, and can be paid out of pocket or folded into the loan amount.

## Do you qualify?

The best candidates for refinancing have regular income, at least 10 to 20 percent equity in their homes, and a FICO credit score of 740 or better. But borrowers with scores as low as 620 can qualify for a Fed-

eral Housing Administration mortgage, which are available through banks, credit unions, and other lenders. People who don't meet those criteria might have to jump over hurdles.

**Low equity.** If you're underwater, owing more than your home is worth, you might get help from the federal Home Affordable Refinance Program. When it was introduced in early 2009, HARP allowed refinancing for up to 125 percent of value for mortgages owned or guaranteed by Fannie Mae or Freddie Mac. "The program was badly designed," says Keith Gumbin-

ger, vice president of HSH Associates, a rate-comparison service, "because it asked lenders to take on additional risk for no reward—a lower interest rate." In October, the Federal Housing Finance Agency announced that HARP would be revamped to reduce fees and remove the 125 percent loan-to-value limit that kept severely underwater homeowners from refinancing. The changes could prompt 2 million new refinances in the coming year, according to CoreLogic, an information and analytics firm.

If you have a home equity line of credit or second mortgage on the property and can pull together the cash, try to pay that off, advises Chris Goode, mortgage product manager at Informa Research, a financial-market-research company. That will increase your equity by reducing the amount of debt against the property.

**Reduced income.** If your income has dropped since you got your mortgage, you might not be able to get a straight refinance. If you can afford about three-quarters of your payment, you might qualify for a loan modification. "Some lenders just change the rate lower," Goode says.

**Unemployment.** You probably won't be able to refinance without a regular income. But you might be eligible for relief through forbearance—the lender lets you suspend or make partial payments for up to 12 months while you search for a job. You might also be eligible for a reduction in principal through the Hardest Hit Fund, a federal foreclosure-prevention program in markets where home prices have collapsed the most. Check with your lender or go to [www.makinghomeaffordable.gov](http://www.makinghomeaffordable.gov).

## Watch out for mortgage scams

The business of preying on desperate homeowners is proliferating. Foreclosure rescue and refinance frauds promise homeowners that they can save their home by making mortgage payments to middlemen, who pocket the money. Bogus mortgage-

modification scams have also been a problem. Here's how to protect yourself:

▶ Never deal with anyone who charges for help. You can get free assistance from a government-approved counselor by calling 888-995-4673.

▶ Beware of anyone who wants you to sign papers immediately. Never sign over the deed to your home.

▶ Never make your mortgage payment to anyone other than your mortgage company without the lender's approval.



## 5-MINUTE CONSULT

# Top 10 health tips for 2012



**Marvin Lipman, M.D.**, clinical professor of medicine emeritus at New York Medical College, is Consumer Reports' chief medical adviser.

**IF THE THREE** most popular New Year's resolutions were carried out, we'd all be thin nonsmokers running marathons. But obesity is an epidemic, most Americans don't exercise, and more than 320 billion cigarettes were sold in 2008, the most recent year tracked. But just because bad habits are so hard to overcome doesn't mean we should stop trying. And if the big three have you stymied (or better yet, if you already eat well, exercise, and don't smoke), put these 10 less-daunting tips on your agenda.

**1 Review and update your immunizations with your doctor.** Adults should be protected against tetanus, diphtheria, whooping cough, and probably hepatitis A and B. Young men and women should consider immunization against human papillomavirus (HPV). All adults over 60 should be vaccinated against shingles and pneumonia, and everyone should have an annual flu shot.

**2 Create or update your living will and name a health-care proxy.** You can't predict when you might become incapacitated by an illness or accident. A living will can be instrumental not only in limiting invasive steps that aren't likely to improve your outcome but also in preventing arguments among those close to you about what you would have wanted.

**3 Review your medications with your doctor regularly.** That includes non-prescription drugs and supplements, too. Such discussions can help ensure you're taking your medications properly and that all of them are listed in your medical record. They can also help identify drugs that you no longer need and that you can stop or take in lower doses.

**4 Learn cardiopulmonary resuscitation (CPR) or update your training.** Knowing what to do until the ambulance arrives can make the difference between life and death for someone close—or a stranger. And approved techniques have become simpler over the years. You can find a class through the American Red Cross or by contacting your local hospital.

**5 Donate blood.** It's always in short supply, and if you're healthy and not taking a lot of medications, you can donate a pint every two months from age 17 until well up into your 70s. Each pint can save as many as three lives. And don't think that just because you have a common blood type, it's not needed; common types are as essential as rare ones.

**6 Support your local volunteer ambulance corps.** I have observed the efforts of those valiant men and women many times. Their on-the-scene judgments have been superb, and their use of emergency interventions on the way to the hospital has saved the life of many an otherwise doomed patient. Help them do their good work by volunteering or making a donation.



**MED CHECK** Ring in the new year by safely discarding old drugs.

**7 Discard outdated medications.** Except for tetracycline, expired drugs generally don't appear to cause harm. But they do become less potent. In particular, throw out any drug more than a year past its expiration date. For tips on how to safely dispose of drugs, go to [www.fda.gov](http://www.fda.gov).

**8 Carry a medical ID at all times.** It can be a medallion or bracelet or just a card in your wallet. Include your doctor's name, an emergency contact, and your medical conditions, medications, and drug allergies.

**9 Check batteries in fire, smoke, and carbon-monoxide alarms.** And make sure home fire extinguishers are full.

**10 View drug ads with skepticism.** That goes even more so for dietary supplements. Remember, the sole purpose of any ad is to sell a product. If it sounds too good to be true, it probably is.

## DID YOU KNOW?

## Most men don't need routine PSA tests

The prostate-specific antigen (PSA) blood test has become standard in checkups for men, especially those over 50. Now a government advisory body has proposed guidelines that advise against it for most men.

The draft recommendations, released in October by the U.S. Preventive Services Task Force, were based on an exhaustive review of the scientific literature on the PSA test, which screens for prostate cancer. It concluded that the test was more likely to lead to substantial

harm than to save lives. That may be in part because the test can't differentiate between aggressive and non-aggressive cancers, so many men end up having surgery and radiation needlessly, exposing them to potentially devastating side effects. Up to five men in 1,000 will die within a month of prostate cancer surgery, the task force said. Another 10 to 70 will suffer dangerous complications. And at least 200 of every 1,000 men treated by surgery or radiation will

experience urinary incontinence, bowel dysfunction, or impotence.

Those serious risks might be acceptable if PSA screening clearly saved lives. But the largest clinical studies to date have found no statistically significant reduction in prostate cancer deaths among men who had the PSA test compared with men who didn't.

**Bottom line.** We stand by our previous advice: Men 75 and older should skip the PSA test. Others should carefully weigh its questionable benefits against its well-established risks before agreeing to have it.

## ► Steps to a smarter table saw

The Consumer Product Safety Commission is considering proposals to improve the safety of table saws. Its staff says those tools cause an estimated 11 amputations a day and thousands of injuries each year.

Safety improvements could involve a braking mechanism for table saws. The commission has seen demonstrations of one such device, called SawStop, which would stop a saw blade upon encountering someone's finger or hand. SawStop detects flesh and almost instantly stops the saw blade from

spinning and drops it into the tool, away from fingers and hands.

Manufacturers have argued that the technology is too expensive.

Meanwhile, here are safety rules to protect against saw injuries:

- Wear safety goggles and hearing protection, and avoid loose clothing and jewelry that could get snagged.
- Use the correct blade and make sure it's clean and sharp.
- Adjust the saw so that you are using only as much blade as you need to clear the material being cut.



# \$1.1 million



► That's the fine Henry Gordy International agreed to pay to settle a Consumer Product Safety Commission claim that it failed to report a safety hazard related to a child's dart and target set. The darts could be inhaled by a child and obstruct breathing.



## ► RECALLS

### AUTOMOBILES '09-'12 VW/Audi diesels

Fuel-injection pulses could coincide with the natural frequency of injector line #2 and lead to resonance that stresses the fuel line. Stress could cause cracks in the injector line and lead to fuel leakage, which could ignite and cause a fire.

**MODELS:** 168,275 '09-'12 Volkswagen Jetta and Jetta SportWagen, '10-'12 VW Golf, and '10-'12 Audi A3 vehicles.

**WHAT TO DO:** Volkswagen will install an improved fuel injector line and vibration dampers free of charge. Call VW at 800-822-8987 for more details.



### HOUSEHOLD PRODUCTS Pourable gel fuel (nine manufacturers)

Gel fuel can ignite unexpectedly and splatter onto people or objects when it's poured into a burning firepot.

**PRODUCTS:** 2 million units of pourable gel fuel sold in plastic one-quart and one-gallon containers since 2008 for \$5 to \$20 by Bird Brain, Bond Manufacturing, Sunjel Company, Fuel Barons, Lamplight Farms, Luminosities, Pacific Décor, Real Flame, and Smart Solar. There have been 65 incidents involving various brands of gel fuel, resulting in two deaths and 34 hospitalizations for second- and third-degree burns on the face and body.

**WHAT TO DO:** Be aware that all pourable gel fuel poses flash fire hazards. Do not try to use or fix gel fuel bottles with homemade remedies. Contact the manufacturer of the gel fuel for a refund and instructions on returning unused containers. Some companies are working on a design for caps that might prevent flash fires.



## ► CONSUMER NOTES

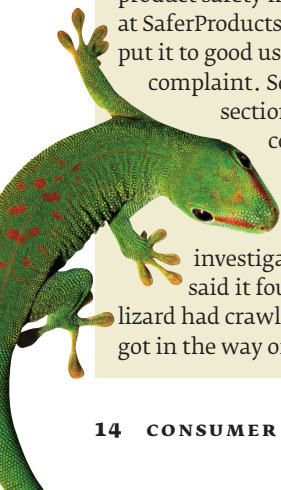
### TV mystery twist

While some companies have complained about the government consumer product safety information database at SaferProducts.gov, at least one has put it to good use to solve a consumer complaint. Sony used the comments

section to respond to one consumer's report this fall of a 40-inch Sony Bravia TV emitting smoke. Upon further investigation, the company said it found the cause: A small lizard had crawled into the TV and got in the way of electric circuitry,

and you can guess what happened next. Sony posted a picture of the aftermath on SaferProducts.gov. But there have been other problems reported with some Bravia TVs, and the company is not blaming them on lizards.

Sony has had reports in Japan of a damaged component that may overheat and ignite inside the TV. It's not recalling the TVs, but it will inspect them. The following models are affected: KDL-40V3000, KDL-40VL130, KDL-40W3000, KDL-40WL135, KDL-40XBR4, and KDL-40XBR5. You can get more information at [www.updatemytv.com](http://www.updatemytv.com) or 888-868-7389.





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# 25 great gifts

Still shopping? Here's our cheat sheet: gear, gadgets, and other gifts that scored highly in our tests and that we recommend. Pictured products appear first on the category lists; other good choices follow.



## Basic cameras

**Sony Cyber-shot**

DSC-HX9V, \$350

**Nikon Coolpix** P300, \$330

**Canon PowerShot** ELPH 500 HS, \$250



## Laptops

**Dell XPS 15Z** HD Display, \$1,100

**Toshiba Satellite** L735-S2310, \$460

**HP Pavilion** dv7-6175us, \$830



## Food processor

**KitchenAid** KFP715[WH], \$100

**Cuisinart** DLC-2011CHB, \$200

**Cuisinart** DFP-14BCN, \$200



## Cordless drills

**Craftsman** 17310, \$100

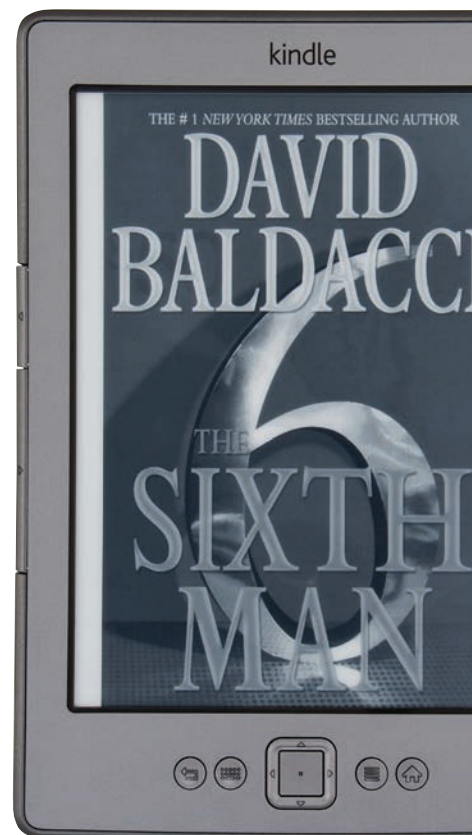
**Hitachi** DS18DSAL, \$170

**Craftsman** 17586, \$70

## E-book readers

**Amazon** Kindle With Special Offers, \$80

**Barnes & Noble**  
Nook Simple Touch  
Reader, \$100







#### ☐ Coffeemakers

**Mr. Coffee** BVMC-SJX33GT, \$40 (conventional drip)  
**Hamilton Beach** BrewStation 47454, \$80 (brew and dispense)  
**Senseo** Supreme SL7832, \$130 (pod-style)



#### ☐ Hand mixers

**Cooks** 10-Speed HM820 (JCPenney), \$30  
**KitchenAid** Ultra Power 5 KHM5AP[WH], \$50  
**KitchenAid** Architect Series KHM920A[CS], \$80



#### ☐ Advanced cameras

**Nikon** D5100, \$800  
**Panasonic** Lumix DMC-G3K, \$600  
**Canon** EOS Rebel T3i, \$850



#### ☐ Camcorders

**Sony** HDR-PJ30V, \$750  
**Panasonic** HDC-SDT750K, \$900 (with 3D lens)  
**Canon** VIXIA HF M41, \$700



#### ☐ LCD TVs

**JVC** JLC37BC3000, \$470  
**LG** 32LK450, \$450  
**Samsung** UN32C4000, \$450

#### ☐ Blenders

**Ninja Master Prep** Professional QB1004, \$60  
**L'Equip** 228, \$160  
**Vita-Mix** 5200, \$450



#### ☐ Knives

**Ginsu** Chikara, \$75  
**Zwilling J.A. Henckels** Twin Professional "S," \$290  
**Kershaw Shun** Classic DMS300, \$270



#### ☐ Cookware

**Emerilware** Emerilware, \$200 (nonstick)  
**Bonjour** Stainless Steel 10-piece, \$540





#### ☐ Toaster ovens

**Oster** TSSTVMNDG, \$80  
**Breville** Smart Oven BOV800XL, \$250  
**Breville** BOV650XL, \$180



#### ☐ Blu-ray players

**LG** BD650, \$140  
**Sony** BDP-S580, \$140  
**Samsung** BD-D5500, \$160



#### ☐ Stand mixers

**KitchenAid** Classic K45SS[WH], \$200  
**Hamilton Beach** Eclectrics 6322[1], \$180  
**KitchenAid** KSM450[ER] (Sears), \$250



#### ☐ MP3 players

**Apple** iPod Touch, \$400 (64GB), \$300 (32GB), \$200 (8GB)  
**Motorola** MotoActv, \$249 (8GB), \$299 (16GB)  
**Samsung** Galaxy, \$230 (8GB)



#### ☐ 3D TVs

**Panasonic** Viera TC-L37DT30, \$990  
**Samsung** PN51D8000, \$1,800  
**LG** 50PZ550, \$900



#### ☐ Steam irons

**Kenmore** 80598, \$75  
**Singer** Expert Finish EF, \$60  
**Rowenta** Focus DZ5080, \$75



#### ☐ Headphones

**Bose** QuietComfort 15, \$300  
**Sony** PIIQ Giiq MDR-PQ2, \$35  
**Sennheiser** CX 215, \$40

#### ☐ Sewing machines

**Brother** Innov-is 40, \$400 (electronic/computerized)  
**Pfaff** Select 3.0, \$800  
**Bernina** Activa 230PE, \$1,350 (electronic/computerized)



#### ☐ Netbooks

**Acer** AOHAPPY2-13875, \$230  
**Asus** Eee PC1015PX-MU17-WT, \$280

#### ☐ Tablets

**Apple** iPad 2 (Wi-Fi, 32GB), \$600  
**Samsung** Galaxy Tab 8.9 (Wi-Fi, 32GB), \$570  
**Sony** Tablet S (Wi-Fi, 32GB), \$600



#### ☐ Water filters (carafe-style)

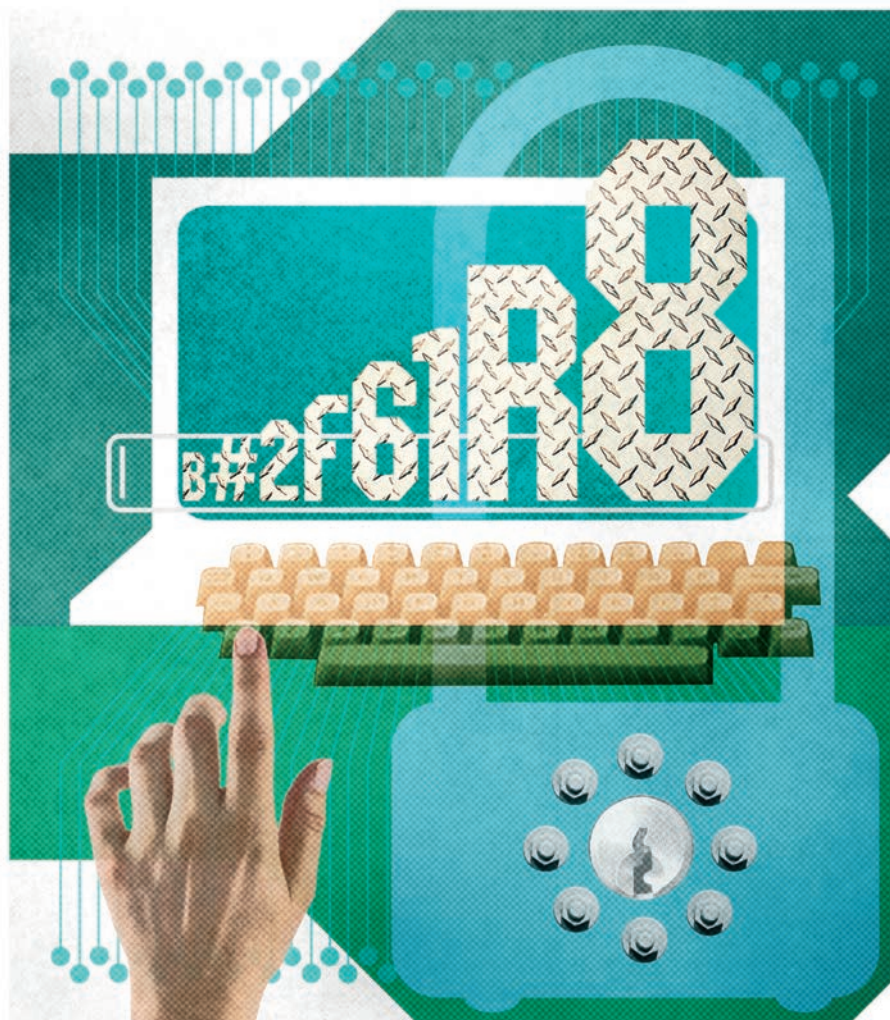
**ZeroWater** Z-Pitcher, \$35  
**Clear2O** CWS100A, \$15  
**Tersano** Lotus LWT-1000, \$229



#### ☐ Sports car

**BMW** 328i convertible, \$49,525





# Hack-proof your passwords

Criminals are getting smarter. So should you.

**M**ORE THAN HALF of U.S. adults have six or more password-protected accounts online, our latest survey shows. Who can remember the passwords? You try by keeping them short and sweet: your pet's name and "123." You use the same one for multiple accounts. And you keep them in your wallet for easy access.

You're not alone. In our survey, 32 percent of respondents used a personal reference in their passwords, almost 20 percent used the same password for more than five accounts, and 23 percent kept a written list of passwords in an insecure place. The national survey of 1,000 adults was

conducted in October by the Consumer Reports National Research Center.

Trouble is, such practices expose you to the kinds of attacks that today's hackers have been launching against websites. When hackers get your passwords, they gain access to your accounts.

It doesn't have to be that way. Read on to learn the best and worst types of passwords, how to create strong ones, where to store them for safekeeping, and—better yet—how to remember them.

## A growing threat

Your chances of having a password stolen on a given day are probably slim, but the

risk is real and growing. To understand why, you need to know how today's hacker works. No, he doesn't sit in a basement, attempting to sign into your account by pounding away at a keyboard until he stumbles upon your password. Most likely, he breaks into an insecure website that has many passwords on file, including yours. Then he finds out many of those passwords using highly sophisticated password-cracking software and a souped-up computer. Here are some of the most troubling developments we've discovered:

**Poor website security.** It's widespread. According to the Privacy Rights Clearinghouse's chronology of data breaches, more than 312 million data records were exposed over the past six years by hackers breaking into sites. (Not all records included passwords.) In a study of more than 3,000 sites published last winter by Whitehat Security, a California-based firm that helps companies protect sites, most were exposed to a serious security vulnerability every single day of 2010. Banking and health care sites performed the best; retail and financial-service sites performed below the overall average.

One in seven sites studied were vulnerable to a prevalent attack known as SQL injection, in which the hacker penetrates an organization's computer by tricking it into executing the hacker's own programming instructions. SQL injection was used to hack into the Sony Pictures site last year, as well as into the sites of Nokia, Heartland Payment Systems, and Lady Gaga, according to the September 2011 Monthly Trend Report by Imperva, a California-based security firm that helps companies prevent data breaches.

Once a site has been hacked, the main safeguard of any user passwords it houses is how securely those passwords are stored. Some sites use storage that's less secure than it should be. Sony Pictures, for example, stored its users' passwords in readable form. Security professionals refer to that as plain text, which provides no obstacle to hackers.

Many reputable sites use a secure storage technique known as hashing, which makes hackers work to convert the stolen data into usable passwords. According to experts we spoke with, the average consumer can't tell how securely their password is stored on a given site. But using the strongest password gives you the best chance of resisting some attacks.

**Lower hacking costs.** The kind of

hardware used to crack passwords has plunged in price. According to Robert Imhoff-Dousharm, information security officer at SanDisk, for \$3,000 you can buy a PC with the password-cracking power of the fastest supercomputer in 1994, which cost \$30 million then. A PC with that power can be assembled from parts you can buy from a computer retailer, and it can crack any eight-character password in just 23 hours, he says. Have a tighter budget but more time? No problem. An \$800 starter version can do it in 40 days.

**Better hacking tools.** The power of password-cracking tools has surged. The key technology is the same speedy graphics card, also known as a graphics processing unit (GPU), that personal computers use to speed up action games.

The latest GPUs are also ideally suited for password-cracking software, Imhoff-Dousharm explains. “GPU technology has advanced so quickly, and password crackers have taken advantage of it to the point where pretty soon nine characters won’t be usable anymore,” he says. It’s fairly easy to find free software online that can crack passwords. John the Ripper, a popular program available from security expert Alexander Peslyak, is intended for legitimate security testing. And Cain & Abel, offered by security consultant Massimiliano Montoro, is a password-recovery tool. But those programs can also be used for illegal password cracking.

**More potential hackers.** With hardware so cheap and powerful software readily available, it’s no surprise that many people have recently taken to password cracking as a hobby, if not an occupation. According to Imhoff-Dousharm, the size of the online community that exchanges tips about the four most popular cracking utilities and the latest GPUs has skyrocketed from a couple of thousand people three years ago to more than 80,000 today.

There’s growing evidence that crimi-



## People who use the same password for many accounts take a big risk.

nals have begun taking advantage of all those trends in a significant way. Two consumer sites, Gawker.com and Sony Pictures, experienced data breaches in the past year, exposing millions of consumers’ passwords to hackers. If those passwords were also used for other accounts, then hackers had access to them, too. In October the FBI arrested a man for hacking into the e-mail accounts of 50 people, including actress Scarlett Johansson and singer Christina Aguilera. He told authorities that he had guessed Johansson’s password by mining publicly available data and social networks for personal information about her.

The 2011 Consumer Reports State of the Net survey, published in June, projected that 3.7 million online U.S. households had been notified in the past year by a company, organization, or the government that their personal information had been lost, stolen, or hacked. The same

survey also projected that the Facebook log-in information and accounts of almost 1 million members had been used for unauthorized purposes in the past year.

Of course, no matter how secure your passwords, you still have to be vigilant about other ways unauthorized people can gain access to your accounts.

Phishing sites, for example, are fraudulent sites that use official-looking e-mail to lure victims, posing as a bank or other familiar institution. Once you have entered your ID and password or PIN, the phisher can use them to steal from your account. The 2011 Consumer Reports State of the Net survey projected that approximately 6.4 million online users had in the previous year submitted personal information in response to an e-mail linking to such a site.

Then there are keyloggers. That malicious software, which stealthily captures and discloses your keystrokes, can be planted on your computer online if it gets hacked or by someone with physical access to it. Security software might be able to detect a keylogger. Anti-keylogger utilities are also available online, though we haven’t tested them. A keylogging device (about the size of a battery) can also be attached to your keyboard’s cable.

You still must watch your own practices. If you disclose a password to someone you don’t personally know and trust, or if you write it down but don’t secure the written version, you have exposed your account to unauthorized access.

### Best ways to protect passwords

Here are the most important password-protection measures that experts recommend to keep hackers at bay:

**Don’t use the same one twice.** If a hacker obtains a password you use from one site, he’ll have access to your other accounts. To make passwords easier to remember, it’s OK to use a similar character pattern from site to site, varying part of it in a way that’s intuitive to you but not obvious to anyone else.

**Make them strong.** Our survey found that 29 percent of people who use passwords on their most sensitive accounts use one with seven or fewer characters. That’s too short. Use at least eight characters. Include an uppercase and a lowercase letter, plus a digit and a special character. That will better protect you from someone guessing it, and it also helps when the password is stored at a site that

### ► BY THE NUMBERS

**10%**   **29%**   **75%**

of those surveyed had more than 30 online accounts that require a password.

of respondents store passwords on a list they carry with them, near their computer, or in an insecure file on their computer, tablet, or mobile device.

of respondents didn’t use the strongest kind of password (eight or more characters containing uppercase and lowercase letters, a numeral, and a special character) for their most sensitive accounts.



uses hashing as the security technique.

Making a password longer also helps when it's protected by hashing. Using a hash-cracking-time spreadsheet developed by Imhoff-Dousharm, we estimate that it would typically take a \$2,000 computer 2½ hours to crack the strongest seven-character password. An eight-character password would hold up for about 10 days, and a nine-character password would last for approximately two and a half years.

**Avoid the obvious.** Hackers have extensive dictionaries of widely used passwords. When you're composing a password, don't use common words, names, or facts from your life that are likely to be in such a dictionary or that someone might guess or find out (e.g. birth date, child's name). Avoid predictable patterns, such as starting with an uppercase letter.

**Keep them safe and up-to-date.** Don't write down full passwords. But if you must, keep them under lock and key. Based on our survey results, we project that 34 million adults keep a list of passwords or clues in a place that might be insecure.

Experts told us they stored their lists on an encrypted flash drive, used an online service such as LastPass ([www.lastpass.com](http://www.lastpass.com)), or stored them encrypted on a computer using KeePass ([www.keepass.info](http://www.keepass.info)), a data-protection application. Hackers can be quite skilled at conning people into disclosing their passwords. Don't give passwords to anyone over the phone, via e-mail, or through a social network.

If you have an old password, it may once have been strong enough but now may be too weak for today's hackers. Consider replacing it with a stronger one.

**Secure your computer and browser.** Keyloggers and other malware are a real risk, especially on publicly accessible computers. Keep your operating system and major applications up-to-date. Run an effective security software suite that automatically updates itself. (For brand-name Ratings, see our June 2011 issue.)

When browsing a password-protected website, look for "https:" in the site's address. Sign into accounts by typing the URL into your browser, not by clicking on a link in an e-mail; the link could take you to a fake site.

## Toward better security

The job of protecting passwords can't rest entirely with consumers. Until more website owners improve security, hackers will keep stealing passwords. Owners should

### DID YOU KNOW?

# 123456

That was the most popular password, used by more than 290,000 people, disclosed in a 2009 breach of 32 million passwords on the social gaming website RockYou.com.

reduce their vulnerability to SQL injection, which has accounted for 83 percent of successful hacking-related data breaches since 2005, according to Imperva's September 2011 Monthly Trend Report.

Ed Skoudis, an instructor at the SANS Institute in Washington, D.C., which trains security professionals, has observed many data breaches. "SQL vulnerabilities are rampant," he says. "SQL injection was a major factor in the cases we were working on 10 years ago. It's depressing that it still remains a major factor today."

Experts also say that sites should store consumer data securely using hashing or

even better, using strong encryption. Publicly held corporations and companies that process credit cards are supposed to follow industry standards for safeguarding data.

But even a well-known site could outsource its data handling to a company whose practices you don't know. For example, Verizon, Walgreens, and other major brands had to warn millions of consumers last spring about possible e-mail scams when Epsilon Data Management, the Dallas-based e-mail marketing firm for those companies, suffered a huge breach of customer e-mail addresses.

Another security approach is two-factor authentication—the user provides information other than a password that a hacker can't obtain. For example, Google and Facebook offer a feature that requires you to get a verification code via telephone before you sign in. (On Facebook, click on Account Settings, then on Security, and then on Login Approvals.) A variation on that uses biometric data, such as from a fingerprint. Two-factor is not perfect, but it is better than using passwords alone.

## How to create a strong password (and remember it)

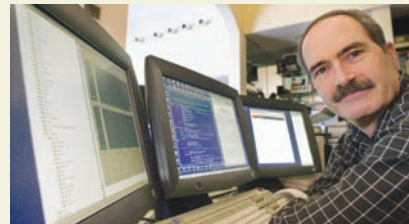
You can create strong passwords that don't make you memorize a cryptic string of letters, numbers, and punctuation symbols. Here are three techniques:

**Use a sentence.** It's easy to remember the first letters of the words in a sentence. For example, children have used this sentence to remember the names of the nine planets: My Very Excellent Mother Just Served Us Nine Pickles. You could use the first letters of those words to generate this strong 9-character password: m\*Emjsu9p, where Venus (the morning or evening star) is represented by \*, the letter for Earth is capitalized, and nine is a numeral. In practice, it's best not to use such well-known sayings to generate acronyms.

**Use a pass phrase.** Several words mixed with numbers and punctuation symbols is known as a pass phrase. For example: stitch9clock^handsapplausE.

The longer the pass phrase, the more secure it is, though you'll be limited by the maximum length the site allows.

**Growing the haystack.** Developed by security expert Steve Gibson, president of California-based Gibson Research ([www.grc.com/haystack](http://www.grc.com/haystack)), growing the haystack takes advantage of the ways hackers crack passwords. "The first thing they'll try is the well-known dictionary of most common passwords," Gibson says. "Then, if they know



**MASTERMIND** Security expert Steve Gibson's tips make passwords easier to retain.

something about you, they will try to guess things from your life." To foil that part of the process, Gibson suggests starting with a phrase that's short but not a common word. That forces the hacker to resort to the slower brute-force approach by trying every combination in existence, which is like looking for a needle in a haystack.

Once you've accomplished that, "the length of the password matters more than its absolute complexity," Gibson says. In other words, make the haystack larger by padding the password with numerous easy-to-remember symbols. For example, the password "c-@T--9---" is 10 characters long and is probably not in any dictionary, but it's not very hard to remember.

A caveat: Don't use any of the above examples as actual passwords. Now that they have been widely published, hackers might add them to their dictionaries.



# Arsenic in your juice

How much is too much? Federal limits don't exist.

**A**RSENIC HAS long been recognized as a poison and a contaminant in drinking water, but now concerns are growing about arsenic in foods, especially in fruit juices that are a mainstay for children.

Controversy over arsenic in apple juice made headlines as the school year began when Mehmet Oz, M.D., host of “The Dr. Oz Show,” told viewers that tests he’d commissioned found 10 of three dozen apple-juice samples with total arsenic levels exceeding 10 parts per billion (ppb). There’s no federal arsenic threshold for juice or most foods, though the limit for bottled and public water is 10 ppb. The Food and Drug Administration, trying to reassure consumers about the safety of apple juice, claimed that most arsenic in juices and other foods is of the organic type that is “essentially harmless.”

But an investigation by CONSUMER REPORTS shows otherwise. Our study, including tests of apple and grape juice, a scientific analysis of federal health data,

a consumer poll, and interviews with doctors and other experts, finds the following:

- Roughly 10 percent of our juice samples, from five brands, had total arsenic levels that exceeded federal drinking-water standards. Most of that arsenic was inorganic

**In our tests, apple and grape juice had arsenic and lead at varying levels.**

arsenic, a known carcinogen.

- One in four samples had lead levels higher than the FDA’s bottled-water limit of 5 ppb. As with arsenic, no federal limit exists for lead in juice.

- Apple and grape juice constitute a significant source of dietary exposure to arsenic, according to our analysis of federal health data from 2003 through 2008.

- Children drink a lot of juice. Thirty-five percent of children 5 and younger drink

juice in quantities exceeding pediatricians’ recommendations, our poll of parents shows.

- Mounting scientific evidence suggests that chronic exposure to arsenic and lead even at levels below water standards can result in serious health problems.

- Inorganic arsenic has been detected at disturbing levels in other foods, too, which suggests that more must be done to reduce overall dietary exposure.

Our findings have prompted Consumers Union, the advocacy arm of Consumer Reports, to urge the FDA to set arsenic and lead standards for apple and grape juice. Our scientists believe that juice should at least meet the 5 ppb lead limit for bottled water. They recommend an even lower arsenic limit for juice: 3 ppb.

“People sometimes say, ‘If arsenic exposure is so bad, why don’t you see more people sick or dying from it?’ But the many diseases likely to be increased by exposure even at relatively low levels are so common already that its effects are overlooked sim-



ply because no one has looked carefully for the connection,” says Joshua Hamilton, Ph.D., a toxicologist specializing in arsenic research and the chief academic and scientific officer at the Marine Biological Laboratory in Woods Hole, Mass.

As our investigation found, when scientists and doctors do look, the connections they’ve found underscore the need to protect public health by reducing Americans’ exposure to this potent toxin.

### Many sources of exposure

Arsenic is a naturally occurring element that can contaminate groundwater used for drinking and irrigation in areas where it’s abundant, such as parts of New England, the Midwest, and the Southwest.

But the public’s exposure to arsenic extends beyond those areas because since 1910, the U.S. has used roughly 1.6 million tons of it for agricultural and other industrial uses. About half of that cumulative total has been used since only the mid-1960s. Lead-arsenate insecticides were widely used in cotton fields, orchards, and vineyards until their use was banned in the 1980s. But residues in the soil can still contaminate crops.

For decades, arsenic was also used in a preservative for pressure-treated lumber commonly used for decks and playground equipment. In 2003 that use was banned, (as was most residential use) but the wood can contribute to arsenic in groundwater when it’s recycled as mulch.

Other sources of exposure include coal-fired power plants and smelters that heat arsenic-containing ores to process copper or lead. Today the quantity of arsenic released into the environment in the U.S. by human activities is three times more than that released from natural sources, says the federal Agency for Toxic Substances and Disease Registry.

The form of arsenic in the examples above is inorganic arsenic. It’s a carcinogen known to cause bladder, lung, and skin cancer in people and to increase risks of cardiovascular disease, immunodeficiencies, and type 2 diabetes.

The other form that arsenic takes is organic arsenic, created when arsenic binds to molecules containing carbon. Fish can contain an organic form of arsenic called arsenobetaine, generally considered non-toxic to humans. But questions have been raised about the human health effects of other types of organic arsenic in foods, including juice.

Use of organic arsenic in agricultural products has also caused concern. For instance, the EPA in 2006 took steps to stop the use of herbicides containing organic arsenic because of their potential to turn into inorganic arsenic in soil and contaminate drinking water. And in 2011, working with the FDA, drug company Alpharma agreed to suspend the sale of Roxarsone, a poultry-feed additive, because it contained an organic form of arsenic that could convert into inorganic arsenic inside the bird, potentially contaminating the meat. Or it could contaminate soil when chicken droppings are used as fertilizer. Other arsenic feed additives are still being used.

### What our tests found

We went shopping in Connecticut, New Jersey, and New York in August and September, buying 28 apple juices and three grape juices. Our samples came from ready-to-drink bottles, juice boxes, and cans of concentrate. For most juices, we bought three different lot numbers to assess variability. (For some juices, we couldn’t find three lots, so we tested one or two.) In all, we tested 88 samples.

Five samples of apple juice and four of grape juice had total arsenic levels exceeding the 10 ppb federal limit for bottled and drinking water. Levels in the apple juices

ranged from 1.1 to 13.9 ppb, and grape-juice levels were even higher, 5.9 to 24.7 ppb. Most of the total arsenic in our samples was inorganic, our tests showed.

As for lead, about one fourth of all juice samples had levels at or above the 5-ppb limit for bottled water. The top lead level for apple juice was 13.6 ppb; for grape juice, 15.9 ppb.

The following brands had at least one sample of apple juice that exceeded 10 ppb: Apple & Eve, Great Value (Walmart), and Mott’s. For grape juice, at least one sample from Walgreens and Welch’s exceeded that threshold. And these brands had one or more samples of apple juice that exceeded 5 ppb of lead: America’s Choice (A&P), Gerber, Gold Emblem (CVS), Great Value, Joe’s Kids (Trader Joe’s), Minute Maid, Seneca, and Walgreens. At least one sample of grape juice exceeding 5 ppb of lead came from Gold Emblem, Walgreens, and Welch’s. Our findings provide a spot check of a number of local juice aisles, but they can’t be used to draw general conclusions about arsenic or lead levels in any particular brand. Even within a single tested brand, levels of arsenic and lead sometimes varied widely.

Arsenic-tainted soil in U.S. orchards is a likely source of contamination for apples, and finding lead with arsenic in juices

## How to reduce your family's risk

**Test your water.** If your home or a home you’re considering buying isn’t on a public water system, have the home’s water tested for arsenic and lead. To find a certified lab, contact your local health department or call the federal Safe Drinking Water Hotline at 800-426-4791. To find contact information for your public water system, go to [cfpub.epa.gov/safewater/ccr/index.cfm](http://cfpub.epa.gov/safewater/ccr/index.cfm).

### Limit children's juice consumption.

Nutrition guidelines set by the American Academy of Pediatrics can help. The academy recommends that infants younger than 6 months shouldn’t drink juice; children up to 6 years old should consume no more than four to six ounces a day and older children, no more than 8 to 12 ounces a day. Diluting juice with water can help meet those goals.

**Consider your food.** Buying certified organic chicken makes sense because organic standards don’t allow the use of chicken feed containing arsenic. But for

juice and other foods, it’s not so certain. Organic standards prohibit the use of synthetic fertilizers and most pesticides, but organic juices still may contain arsenic if they’re made from fruit grown in soil where arsenical insecticides were used.

### Need a home-treatment system?

Contact NSF International at [www.nsf.org/certified/DWTU](http://www.nsf.org/certified/DWTU) or 800-673-8010 for info on systems certified to lower arsenic levels to no more than 10 ppb. The University of Georgia Cooperative Extension discusses treatment technologies at [aesl.ces.uga.edu/publications/watercirc](http://aesl.ces.uga.edu/publications/watercirc). (Click on “Removal of Arsenic from Household Water.”)

**If you’re concerned, get tested.** Ask your doctor for a urine test for you or your child to determine arsenic levels. Don’t eat seafood for 48 to 72 hours before being tested to avoid misleadingly high levels from “fish arsenic.” For a medical toxicologist in your area who can interpret results, call the American Association of Poison Control Centers at 800-222-1222.

that we tested is not surprising. Even with a ban on lead-arsenate insecticides, “we are finding problems with some Washington state apples, not because of irresponsible farming practices now but because lead-arsenate pesticides that were used here decades ago remain in the soil,” says Denise Wilson, Ph.D., an associate professor at the University of Washington who has tested apple juices and discovered elevated arsenic levels even in brands labeled organic.

Over the years, a shift has occurred in how juice sold in America is produced. To make apple juice, manufacturers often blend water with apple-juice concentrate from multiple sources. For the past decade, most concentrate has come from China. Concerns have been raised about the possible continuing use of arsenical pesticides there, and several Chinese provinces that are primary apple-growing regions are known to have high arsenic concentrations in groundwater.

A much bigger test than ours would be needed to establish any correlation between elevated arsenic or lead levels and the juice concentrate’s country of origin. Samples we tested included some made from concentrate from multiple countries including Argentina, China, New Zealand, South Africa, and Turkey; others came from a single country. A few samples solely from the U.S. had elevated levels of lead or arsenic, and others did not. The same was true for samples containing only Chinese concentrate.

The FDA has been collecting its own data to see whether it should set guidelines to continue to ensure the safety of apple juice, a spokeswoman told us.

The Juice Products Association said, “We are committed to providing nutritious and safe fruit juices to consumers and will comply with limits established by the agency.”

### Answering a crucial question

We also wanted to know whether people who drink juice end up being exposed to more arsenic than those who don’t.

So we commissioned an analysis of data from the National Health and Nutrition Examination Survey (NHANES), conducted annually by the National Center for Health Statistics. Information is collected on the health and nutrition of a nationally representative sample of the U.S. population, based on interviews and physical exams that may include a blood or urine test. Officials and researchers often use the data to determine risk factors for major diseases



**SAMPLES** We tested juice from bottles, cans, and juice boxes that we bought in three states.

and develop public health policy. In fact, data on lead in the blood of NHANES participants were instrumental in developing policies that have successfully resulted in lead being removed from gasoline.

Our analysis was led by Richard Stahlhut, M.D., M.P.H., an environmental health researcher at the University of Rochester with expertise in NHANES data, working with Consumer Reports statisticians. Ana Navas-Acien, M.D., Ph.D., a physician-epidemiologist at Johns Hopkins University’s Bloomberg School of Public Health, also provided guidance. She was the lead author

## Over time, people who ingest even low arsenic levels can become sick.

of a 2008 study in the *Journal of the American Medical Association* that first linked low-level arsenic exposure with the prevalence of type 2 diabetes in the U.S.

Stahlhut reviewed NHANES data from 2003 through 2008 from participants tested for total urinary arsenic who reported their food and drink consumption for 24 hours the day before their NHANES visit. Because most ingested arsenic is excreted in urine, the best measure of recent exposure is a urine test.

Following Navas-Acien’s advice, we excluded from our NHANES analysis anyone

with results showing detectable levels of arsenobetaine, the organic arsenic in seafood. That made the results we analyzed more likely to represent inorganic arsenic, of greatest concern in terms of potential health risks.

The resulting analysis of almost 3,000 study participants found that those reporting apple-juice consumption had on average 19 percent greater levels of total urinary arsenic than those subjects who did not, and those who reported drinking grape juice had 20 percent higher levels. The results might understate the correlation between juice consumption and urinary arsenic levels because NHANES urinary data exclude children younger than 6, who tend to be big juice drinkers.

“The current analysis suggests that these juices may be an important contributor to dietary arsenic exposure,” says Keeve Nachman, Ph.D., a risk scientist at the Center for a Livable Future and the Bloomberg School of Public Health, both at Johns Hopkins University. “It would be prudent to pursue measures to understand and limit young children’s exposures to arsenic in juice.”

Robert Wright, M.D., M.P.H., associate professor of pediatrics and environmental health at Harvard University who specializes in research on the effect of heavy-metals exposure in children, says that findings from our juice tests and database analysis concern him: “Because of their small size, a child drinking a box of



juice would consume a larger per-body-weight dose of arsenic than an adult drinking the exact same box of juice. Those brands with elevated arsenic should investigate the source and eliminate it.”

## A chronic problem

Arsenic has been notoriously used as a poison since ancient times. A fatal poisoning would require a single dose of inorganic arsenic about the weight of a postage stamp. But chronic toxicity can result from long-term exposure to much lower levels in food, and even to water that meets the 10-ppb drinking-water limit.

A 2004 study of children in Bangladesh suggested diminished intelligence based on test scores in children exposed to arsenic in drinking water at levels above 5 ppb, says study author Joseph Graziano, Ph.D., a professor of Environmental health sciences and pharmacology at Columbia University. He’s now conducting similar research with children living in New Hampshire and Maine, where arsenic levels of 10 to 100 ppb are commonly found in well water, to determine whether better nutrition in the U.S. affects the results.

People with private wells may face greater risks than those on public systems because they’re responsible for testing and treating their own water. In Maine, where almost half the population relies on private wells, the U.S. Geological Survey found arsenic levels in well water as high as 3,100 ppb.

And a study published in 2011 in the *International Journal of Environmental Research and Public Health* examined the long-term effects of low-level exposure on more than 300 rural Texans whose groundwater was estimated to have arsenic at median levels below the federal drinking-water standard. It found that exposure was related to poor scores in language, memory, and other brain functions.

## Warning signs

Chronic arsenic exposure can initially cause gastrointestinal problems and skin discoloration or lesions. Exposure over time, which the World Health Organization says could be five to 20 years, could increase the risk of various cancers and high blood pressure, diabetes, and reproductive problems.

Signs of chronic low-level arsenic exposure can be mistaken for other ailments such as chronic fatigue syndrome. Usually the connection to arsenic exposure is not

made immediately, as Sharyn Duffy of Geneseo, N.Y., discovered. She visited a doctor in 2007 about pain and skin changes on the sole of her left foot. She was referred to a podiatrist and eventually received a diagnosis of hyperkeratosis, in which lesions develop or thick skin forms on the palms or soles of the feet. It can be among the earliest symptoms of chronic arsenic poisoning. But she says it was roughly two years before she was finally referred to a neurologist, who suggested testing for arsenic. She had double the typical levels.

“Testing for arsenic isn’t part of a routine checkup,” says Duffy, a retiree.

“When you come in with symptoms like I had, ordering that kind of test probably wouldn’t even occur to most doctors.”

Michael Harbut, M.D., chief of the environmental cancer program at Karmanos Institute in Detroit, says, “Given what we know about the wide range of arsenic exposure sources we have in this country, I suspect there is an awful lot of chronic, low-level arsenic poisoning going on that’s never properly diagnosed.”

Emerging research suggests that when arsenic exposure occurs in the womb or in early childhood, it not only increases cancer risks later in life but also can cause last-

## Our test findings of apple and grape juice

There’s no federal limit for arsenic or lead in juice. In our tests, 25 percent of samples exceeded the 5-ppb lead limit for bottled water, and 10 percent exceeded the 10-ppb limit for arsenic in drinking water. Most arsenic we detected was inorganic. Our tests don’t offer conclusions about overall levels in any juice type or brand. We tested three lots of most juices. Smaller containers are noted. For more details see [www.ConsumerReports.org/juicebox](http://www.ConsumerReports.org/juicebox).

Juice (in alphabetical order)	Total arsenic <sup>1</sup> (ppb)	Lead (ppb)
<b>365 Everyday Value</b> Organic 100% Apple Juice (Whole Foods) <sup>2</sup>	7.0 to 7.1	3.5 to 3.8
<b>America’s Choice</b> 100% Apple Juice (A&P)	1.4 to 4.4	0.5 to 5.6
<b>Apple &amp; Eve</b> 100% Apple Juice (6.75-ounce juice boxes)	5.0 to 10.5	1.9 to 3.4
<b>Gerber</b> 100% Apple Juice (4-ounce bottles)	5.8 to 9.7	3.4 to 13.6
<b>Gerber</b> Organic 100% Apple Juice (4-ounce bottles)	5.5 to 5.7	2.2 to 2.3
<b>Gold Emblem</b> 100% Apple Juice (CVS)	3.1 to 9.4	2.9 to 5.6
<b>Gold Emblem</b> 100% Grape Juice (CVS)	5.9 to 7.5	6.5 to 8.6
<b>Great Value</b> 100% Apple Juice (Walmart)	10.1 to 13.9	3.7 to 5.1
<b>Great Value</b> 100% Apple Juice (Walmart, 10-ounce bottles) <sup>3</sup>	5.5	3.4
<b>Great Value</b> 100% Apple Juice with fiber Not from Concentrate (Walmart)	2.9 to 3.9	0.1 to 0.2
<b>Joe’s Kids</b> 100% Apple Juice (Trader Joe’s, 6.75-ounce juice boxes)	4.1 to 5.7	5.3 to 9.7
<b>Juicy Juice</b> 100% Apple Juice Non Frozen Concentrate <sup>4</sup>	1.9 to 4.2	1.4 to 2.2
<b>Juicy Juice</b> 100% Apple Juice	1.7 to 3.0	0.8 to 2.3
<b>Juicy Juice</b> 100% Apple Juice (10-ounce bottles)	1.7 to 1.9	1.1 to 3.5
<b>Juicy Juice</b> 100% Apple Juice (6.75-ounce juice boxes)	1.3 to 2.8	1.4 to 2.8
<b>Lucky Leaf</b> 100% Apple Juice <sup>2</sup>	2.3 to 3.2	0.8 to 1.2
<b>Minute Maid</b> 100% Apple Juice (10-ounce bottles)	6.2 to 6.7	4.2 to 6.5
<b>Minute Maid</b> 100% Apple Juice (juice box packaged for McDonald’s)	2.0 to 5.6	0.8 to 5.3
<b>Mott’s</b> Original 100% Apple Juice	4.0 to 7.9	2.1 to 3.8
<b>Mott’s</b> Original 100% Apple Juice (4.23-ounce juice boxes)	4.0 to 10.2	0.6 to 0.7
<b>Mott’s</b> Original 100% Apple Juice (6.75-ounce juice boxes)	2.1 to 2.8	0.6 to 1.3
<b>Nature’s Own</b> 100% Apple Juice <sup>2</sup>	2.3 to 2.4	0.9 each
<b>Old Orchard</b> 100% Apple Juice Frozen Concentrate <sup>4</sup>	1.6 to 4.8	0.6 to 1.3
<b>Red Jacket Orchards</b> 100% Fuji Apple Juice	1.3 to 1.8	0.1 to 0.2
<b>Rite Aid Pantry</b> 100% Apple Juice	1.1 to 6.4	0.4 to 2.6
<b>Seneca</b> 100% Apple Juice Frozen Concentrate <sup>4</sup>	2.3 to 4.4	0.9 to 5.5
<b>Tropicana</b> 100% Apple Juice (15.2-ounce bottles)	1.5 to 2.1	0.5 to 1.0
<b>Walgreens</b> 100% Apple Juice	4.0 to 6.8	2.3 to 6.9
<b>Walgreens</b> 100% Grape Juice	9.7 to 24.7	10.1 to 15.9
<b>Welch’s</b> 100% Apple Juice Pourable Concentrate <sup>4</sup>	1.1 to 4.1	0.6 to 1.3
<b>Welch’s</b> 100% Grape Juice	7.1 to 12.4	3.5 to 9.2

<sup>1</sup> Includes organic and inorganic arsenic. <sup>2</sup> Two lots tested. <sup>3</sup> One lot tested. <sup>4</sup> Reconstituted; assumes no arsenic or lead from added water.

ing harm to children's developing brains and endocrine and immune systems, leading to other diseases, too.

Case in point: From 1958 through 1970, residents of Antofagasta, Chile, were exposed to naturally occurring arsenic in drinking water that peaked at almost 1,000 ppb before an arsenic removal plant was installed. Studies led by researchers at the University of California at Berkeley found that people born during that period who had probable exposure in the womb and during early childhood had a lung-cancer death rate six times higher than those in their age group elsewhere in Chile. Their rate of death in their 30s and 40s from another form of lung disease was almost 50 times higher than for people without that arsenic exposure.

"Recent studies have shown that early-childhood exposure to arsenic carries the most serious long-term risk," says Joshua Hamilton of the Marine Biological Laboratory. "So even though reducing arsenic exposure is important for everyone, we need to pay special attention to protecting pregnant moms, babies, and young kids."

### Other dietary exposures

In addition to juice, foods including chicken, rice, and even baby food have been found to contain arsenic—sometimes at higher levels than the amounts found in juice. Brian Jackson, Ph.D., an analytical chemist and research associate professor at Dartmouth College, presented his findings at a June 2011 scientific conference in Aberdeen, Scotland. He reported finding up to 23 ppb of arsenic in lab tests of name-

brand jars of baby food, with inorganic arsenic representing 70 to 90 percent of those total amounts.

Similar results turned up in a 2004 study conducted by FDA scientists in Cincinnati, who found arsenic levels of up to 24 ppb in baby food, with sweet potatoes, carrots, green beans, and peaches containing only the inorganic form. A United Kingdom study published in 2008 found that the levels of inorganic arsenic in 20-ounce packets of dried infant rice cereals ranged from 60 to 160 ppb. Rice-based infant cereals are often the first solid food that babies eat.

## Consumers Union wants federal limits for arsenic and lead in juice.

Rice frequently contains high levels of inorganic arsenic because it is among plants that are unusually efficient at taking up arsenic from the soil and incorporating it in the grains people eat. Moreover, much of the rice produced in the U.S. is grown in Arkansas, Louisiana, Mississippi, Missouri, and Texas, on land formerly used to grow cotton, where arsenical pesticides were used for decades.

"Initially, in some regions rice planted there produced little grain due to these arsenical pesticides, but farmers then bred a type of rice specifically designed to produce high yields on the contaminated soil," says Andrew Meharg, professor of biogeochem-

istry at the University of Aberdeen, in Scotland. Meharg studies human exposures to arsenic in the environment. His research over the past six years has shown that U.S. rice has among the highest average inorganic arsenic levels in the world—almost three times higher than levels in Basmati rice imported from low-arsenic areas of Nepal, India, and Pakistan. Rice from Egypt has the lowest levels of all.

Infant rice cereal for the U.S. market is generally made from U.S. rice, Meharg says, but labeling usually doesn't specify country of origin. He says exposure to arsenic through infant rice cereals could be reduced greatly if cereal makers used techniques that don't require growing rice in water-flooded paddies or if they obtained rice from low-arsenic areas. His 2007 study found that median arsenic levels in California rice were 41 percent lower than levels in rice from the south-central U.S.

### Setting a standard

Evidence of arsenic's ability to cause cancer and other life-threatening illnesses has surged because some of the diseases linked to it have latency periods of several decades. Only recently have scientists been able to more fully measure the effects in populations that were exposed to elevated levels of arsenic in drinking water many years ago.

The Environmental Protection Agency periodically revises its assessment of the toxicity of various chemicals to offer guidance on drinking-water standards. Based on such a review, the agency changed the water standard for arsenic to 10 ppb, effective in 2006, from the 50-ppb limit it set in 1975. The EPA had proposed a 5-ppb limit in 2000, so the current limit is a compromise that came only after years of haggling over the costs of removing arsenic. Since 2006, New Jersey has had a 5-ppb threshold, advising residents that water with arsenic levels above that shouldn't be used for drinking or cooking.

For known human carcinogens such as inorganic arsenic, the EPA assumes there's actually no "safe" level of exposure, so it normally sets exposure limits that include a margin of safety to ideally allow for only one additional case of cancer in a million people, or at worst, no more than one in 10,000. For water with 10 ppb of arsenic, the excess cancer risk is one in 500.

Debate over that standard is likely to begin anew. The agency's latest draft report, from February 2010, proposes that the number used to calculate the cancer

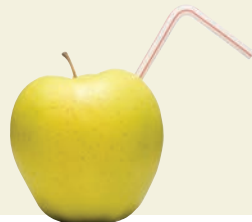
## How much juice do children drink?

Too many children drink too much juice, according to our poll of parents. One in four toddlers 2 and younger and 45 percent of children ages 3 to 5 drink 7 or more ounces of juice a day.

The American Academy of Pediatrics cautions that to help prevent obesity and tooth decay, children younger than 6 should drink no more than 6 ounces a day, about the size of a juice box. (Infants

younger than 6 months shouldn't drink any.) The possible presence of arsenic or lead in juices is all the more reason to stick with those nutrition-based limits.

Our findings are from 555 telephone interviews in October with parents, who were asked about children's juice consumption the previous day. Totals don't equal 100 percent because some said they didn't know how much juice their kids drank.



Amount of juice consumed	Children 2 and under	Children 3 to 5	Total children 5 or younger
None	40%	22%	31%
1 to 6 oz.	28	26	27
7 to 12 oz.	18	29	23
16 oz. or more	8	16	12



risk posed by ingesting inorganic arsenic be increased 17-fold to reflect arsenic's role in causing bladder and lung cancer. The proposal "suggests that arsenic's carcinogenic properties have been underestimated for a long time and that the federal drinking-water standard is underprotective based on current science," says Keeve Nachman, the Johns Hopkins scientist.

Each year the FDA tests a variety of foods and beverages for arsenic and other contaminants. It also started a program in 2005 to test for specific toxins such as arsenic and lead in domestic and imported products. So far that program has tested 70 samples of apple juice and concentrate. And the agency can alert inspectors at U.S. ports to conduct increased surveillance for products suspected to pose risks. Currently there's an alert for increased surveillance of apple concentrate from China and six other countries "where we have a suspicion there may be high levels of arsenic in their products," says FDA spokeswoman Stephanie Yao. But in fiscal 2010, the agency conducted physical inspections of only 2 percent of imported food shipments.

Consumers Union urges federal officials to set a standard for total arsenic in apple and grape juice. Our research suggests that the standard should be 3 ppb. Concerning lead, juice should at least meet the bottled-water standard of 5 ppb. Such standards would better protect children, who are most vulnerable to the effects of arsenic and lead. And they're achievable levels: 41 percent of the samples we tested met both thresholds.

Moreover, the EPA should impose stricter drinking-water standards for arsenic, Consumers Union believes. (The drinking-water threshold for lead is 15 ppb, which acknowledges that many older homes have water pipes or solder with lead.) Officials should also ban arsenic in pesticides, animal-feed additives, and fertilizers.

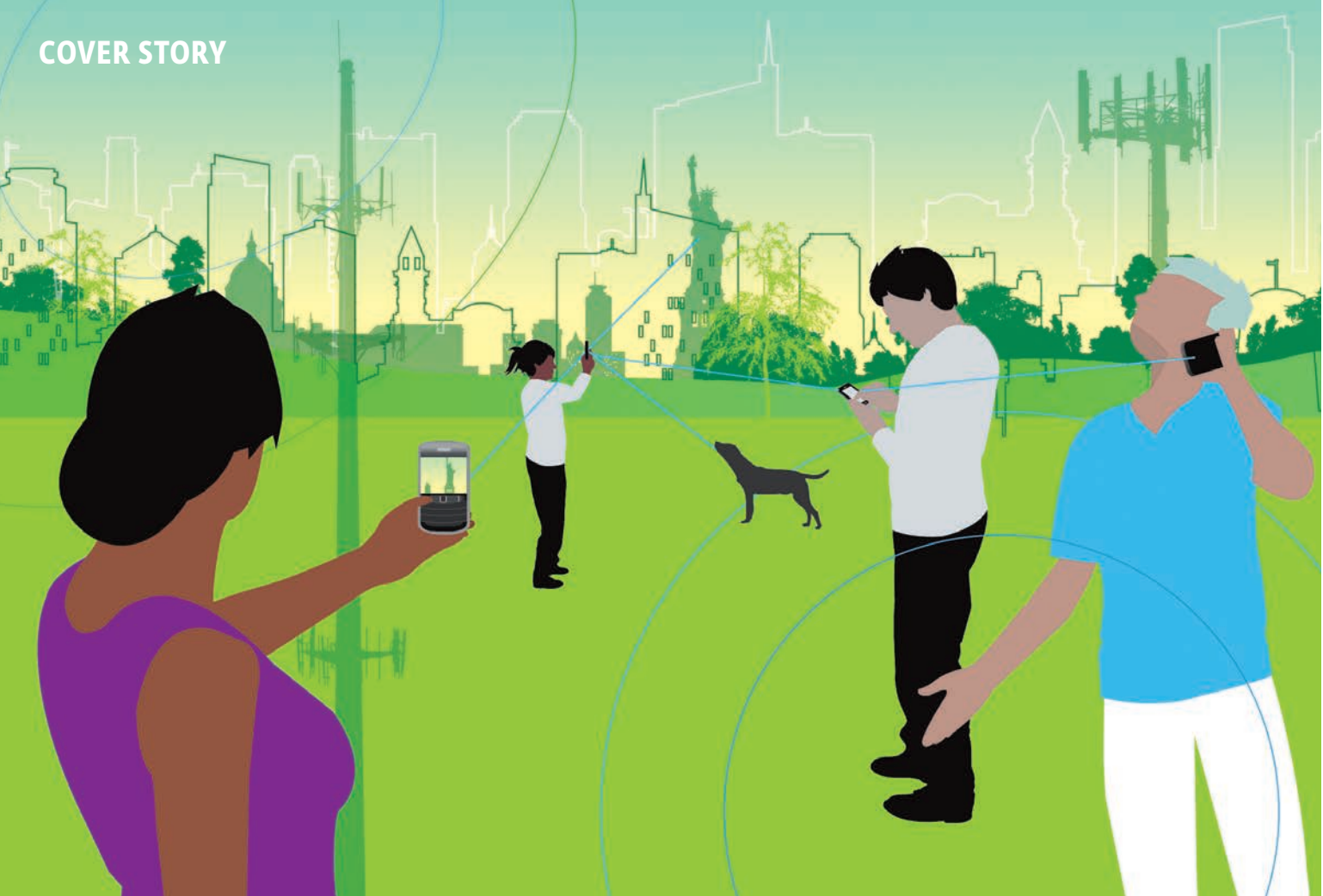
As our tests show, sources of lead haven't been eliminated, but dramatic progress has been made: Since the 1970s, average blood lead levels in children younger than 6 have dropped by about 90 percent, thanks to a federal ban on lead in house paint and gas. The U.S. should be equally aggressive with arsenic, suggests Joseph Graziano at Columbia University. "We tackled every source, from gasoline to paint to solder in food cans," he says, "and we should be just as vigilant in preventing arsenic from entering our food and water because the consequences of exposure are enormous for adults as well as children."

## ConsumerReports® TV NEWS



**DID YOU KNOW** local TV stations air news reports featuring our testing and unbiased product Ratings? Watch newscasts on the stations listed below to see the latest test results from **CONSUMER REPORTS** labs.

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Austin, TX	KVUE	TV-24	Phoenix, AZ	KPNX	TV-12
Bakersfield, CA	KBAK/KBFX	TV-29/58	Pittsburgh, PA	KDKA	TV-2
Baltimore, MD	WBFF/WNUV	TV-45/54	Portland, OR	KATU	TV-2
Birmingham, AL	WBRC	TV-6	Raleigh, NC	WRAL/WRAZ	TV-5/50
Boise, ID	KBOI	TV-2	Rapid City/Lead, SD	KOTA/KHSD	TV-3/11
Chattanooga, TN	WTVG	TV-9	Reno, NV	KRNV	TV-4
Chicago, IL	WLS	TV-7	Roanoke, VA	WSLS	TV-10
Cincinnati, OH	WCPO	TV-9	Sacramento, CA	KCRA	TV-3
Cleveland, OH	WEWS	TV-5	San Antonio, TX	KSAT	TV-12
Colorado Springs, CO	KKTU	TV-11	San Francisco, CA	KGO	TV-7
Columbia, SC	WLTX	TV-19	San Juan, Puerto Rico	WAPA	TV-4
Columbus, GA	WRBL	TV-3	Scottsbluff, NE	KDUH	TV-4
Columbus, OH	WBNS	TV-10/21	Seattle, WA	KOMO	TV-4
Denver, CO	KUSA	TV-9	Sheridan, WY	KSGW	TV-12
Detroit, MI	WXYZ	TV-7	Shreveport, LA	KSLA	TV-12
El Paso, TX	KFOX	TV-14	South Bend, IN	WSBT	TV-22
Eugene, OR	KEZI	TV-9	Springfield, MO	KYTV	TV-3
Evansville, IN	WEHT	TV-25	St. Thomas, USVI	USVI	TV-2
Fargo, ND	KVLY	TV-11	Syracuse, NY	WSYR	TV-9
Fort Myers, FL	WINK	TV-11/5	Tampa/St. Petersburg, FL	WFTS	TV-28
Fresno, CA	KFSN	TV-30	Tulsa, OK	KJRH	TV-2
Harrisburg, PA	WHTM	TV-27	Tyler/Lufkin, TX	KLTV/KTRE	TV-7/9
Houston, TX	KTRK	TV-13	Washington, DC	WUSA	TV-9
Huntsville, AL	WAAY	TV-31	Wausau/Eagle River, WI	WAOW/WYOWTV-9/34	
Indianapolis, IN	WXIN	TV-59	Weslaco, TX	KRGV	TV-5
Jackson, MS	WLBT	TV-3	Wichita, KS	KWCH	TV-12
Jacksonville, FL	WJXT	TV-4	Wichita Falls, TX	KFDX	TV-3
Johnson City, TN	WJHL	TV-11	Wilmington, NC	WILM	TV-10
La Crosse, WI	WKBT	TV-8	Yakima/Pasco, WA	KIMA/KEPR	TV-29/19
Lansing, MI	WILX	TV-10	Youngstown, OH	WFMJ	TV-21
Las Vegas, NV	KSNV	TV-3	<b>CANADIAN STATIONS</b>		
Lewiston, ID	KLEW	TV-3	Calgary	CFCN-TV	
Los Angeles, CA	KABC	TV-7	Edmonton	CFRN-TV	
Louisville, KY	WAVE	TV-3	Halifax	CJCH-TV/ATV-TV	
Madison, WI	WISC	TV-3	Kitchener	CKCO-TV	
Medford, OR	KDRV	TV-12	Montreal	CFCF-TV	
Montgomery, AL	WSFA	TV-12	Ottawa	CJOH-TV	
Nashville, TN	WTVF	TV-5	Regina	CKCK-TV	
New York, NY	WABC	TV-7	Saskatoon	CFQC-TV	
Norfolk, VA	WTKR	TV-3	Sudbury	CICI-TV/MCTV	
Oklahoma City, OK	KFOR	TV-4	Toronto	CFTO-TV	
Omaha, NE	WOWT	TV-6	Vancouver	BC-CTV	
Orlando, FL	WFTV	TV-9	Peoria, IL	CKY-TV	
Peoria, IL	WMBD	TV-31			



# Best phones & service

The top carriers and hottest phones, plus cost-saving strategies

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**I**F THE BEST NEWS about mobile life these days is the arrival of smarter phones and faster networks, the worst is what those improvements can cost.

The advances are significant: large, dazzling displays; full-featured cameras; enhanced video chat; and better voice recognition. And then there's speed. Many new smart phones have faster processors, and one in five—including most of our top-rated models—can connect to speedy 4G (fourth-generation) data networks.

Such advantages no doubt account for the fact that more than 60 percent of CONSUMER REPORTS readers responding to our latest survey on cell phones own a smart phone. In most cases, those with 4G phones were more satisfied with their carriers than those with no access to that high-speed service—especially when it came to the data service used to download

videos, browse the Web, and more.

But progress comes at a price, and it's little wonder that value was the biggest factor by far in driving satisfaction with cell-phone service among our survey respondents. The cellular cutting edge can be expensive and could get even costlier.

The latest smart phones typically cost \$200 and up, even with a two-year contract, and monthly service can easily cost \$100. With data usage on smart phones skyrocketing—the average soared by almost 90 percent from 2010 to 2011, according to Nielsen—bills could go even higher.

That's especially true now that all the major carriers except Sprint have dropped unlimited, full-speed data provisions. Most have moved to plans that bill in tiers according to the amount of data you use or that slow download speeds after you hit a specified monthly limit.



But some things about cell-phone plans don't change much—unfortunately. Carriers still don't make it easy to compare plans; each typically offers unequal buckets of minutes, messages, and megabytes. Some phone owners are texting more and talking less, but most contract plans still require buying hundreds of voice minutes a month, whether or not you need them. And unless you buy messages in bundles or in unlimited plans—again, possibly more messages than you might need—you'll pay an à la carte charge that's exorbitant, considering how little data a text message carries.

Read on for a rundown of the latest developments in the market, news from our tests and reader surveys, and advice on how to get more and better for less.

### Best and worst carriers

When it comes to standard cell-phone service (meaning billed monthly, often under a contract), the most satisfying carriers in our Ratings were smaller. At the top of the Ratings were Consumer Cellular, a national carrier that uses AT&T's network, and U.S. Cellular, which operates in 26 states. Credo, which offers service in much of the country over Sprint's network and donates part of its earnings to socially responsible causes, was next in satisfaction.

The major national monthly-bill carriers now rate no better than the third tier, occupied by Verizon and Sprint. T-Mobile was below those two but continued to rate significantly better than higher-priced AT&T, whose plan to eliminate its better rival was thwarted by a Department of Justice antitrust lawsuit last summer. A trial is scheduled to begin in February.

On the whole, readers who prepaid for their service (without a contract, for monthly minutes, unlimited or pay-as-you-go) were more satisfied overall than respondents with standard service.

Customers at prepaid carriers were also happier with the value for money of their service. Paying à la carte for the calls or texts you send can be a cost-saver for occasional phone users, and unlimited plans offered by prepaid specialists such as Straight Talk typically cost less than standard service from a major carrier.

One reason prepaid customers may be happier with their service is that they use the phone less than customers with standard service for such demanding tasks as Web surfing and watching videos. With simpler needs, those customers might be

easier to please overall. (Not surprisingly, most so-called prepaid carriers offer few if any smart phones.)

And prepaid looks like it's getting cheaper—again. As we went to press, TracFone began promoting a “triple minutes for life” option free with certain

## For standard service, smaller carriers satisfied the most.

phone models, which means if you buy 120 minutes for \$30, you get 360 minutes, which cuts the unit price from 25 to 8 cents per minute. T-Mobile offered a data- and text-centric prepaid 4G plan providing 5GB of data, unlimited texting, and 100 voice minutes for only \$30, which is great for data hogs who don't talk much.

Interestingly, usage patterns for subscribers to Consumer Cellular's contract

plans more closely resemble those of typical prepaid customers. That, along with its relatively low prices, might help explain the carrier's high standing in the standard-service Ratings.

### Phones are better

The top phones in our smart phone Ratings are the best we've ever tested, with the highest overall scores for phones so far. Most of the standouts are 4G phones that share several traits, including stunning screens and cameras with more sophisticated controls and features. Many were from Samsung, which made 20 percent of the phones in this Ratings, up from only 5 percent in our 2009 report. Our tests uncovered other news, too: Apple's newest iPhone, the 4S, scores highly in our Ratings and is recommended.

**Speed.** Fourth-generation models provide super-smooth video streaming and ultrafast loading of Web-based content, at least under optimal network conditions.

### ■ CLOSE-UP

## At last, a new iPhone we can recommend

For more than a year, our smart-phone Ratings reflected an anomaly: The iPhone 4 ranked highly on our standard tests, and yet we couldn't recommend it because of a flaw with its reception. Its successor, the iPhone 4S, is also a fine performer, and it doesn't have that problem. We recommend this phone.

Though the new iPhone closely resembles the iPhone 4 in appearance, it isn't prone to dropping calls when you cover a spot on the phone's lower left side under weak signal conditions. Apple says the iPhone 4S has a redesigned antenna system; perhaps that's why it passed our tests where the iPhone 4 didn't. (The iPhone 4 remains available and still doesn't pass, we confirmed in tests of the phone. But when it's used with a case, the problem disappears.)

As we went to press, Apple acknowledged a battery-life problem with some samples of the iPhone 4S and iPhone 4. Some owners complained on user forums of short run times. Apple blamed “a few bugs” in its latest mobile operating system, iOS 5, and promised to deliver a software update to address the problem in November.

Because of the complaints, we ran samples of the iPhone 4S and new and old samples of the iPhone 4 through special tests in our labs. We found no notable battery problems on the phones. We plan to retest them with the software update when it is available, just in case the fix affects battery performance in any way.

The iPhone 4S has other improvements

over the iPhone 4, including a better camera and a faster processor. It also adds the intriguing Siri voice-activated feature, which accepts and responds to verbal commands in a conversational tone using a synthetic-sounding female voice.



Apple iPhone 4S

## FIRST LOOKS

# Hot new phones

Here are our first impressions of several significant new smart phones that arrived too late to be included in our Ratings.

### HTC Vivid \$200 (AT&T)

### Samsung Galaxy S II Skyrocket \$250 (AT&T)

These phones, which are the first to run on AT&T's newly upgraded 4G (LTE) network, have 4.5-inch displays (high-resolution, in the case of the Vivid); an 8-megapixel camera capable of recording video at 1080p; and a front-facing camera for video chat. They run on the Android Gingerbread operating system and have dual-core processors.

### Samsung Galaxy Nexus (Verizon)

This 4G (LTE) phone, for which a price wasn't yet available at press time, promises to be a groundbreaker in several ways. Its specs list the largest screen (4.65 inches) and the highest screen resolution (1280 x 720) we've ever seen in a phone.

It's also the first phone to run on Ice Cream Sandwich, the latest version of the Android operating system. The update promises a newly designed user interface, a fast browser, and a new implementation of Gmail that lets you search through messages even when you're offline. A new app called People will supposedly let you browse high-res photos and updates from Google+. A Face Unlock feature will use facial recognition to unlock the phone.

Other Galaxy Nexus features include a dual-core processor and 5-megapixel camera that can record video in 1080p, a front-facing camera for video chats, a compass, a gyro, and a barometer.

### Motorola Droid Razr \$300 (Verizon)

The Razr is a 4G (LTE) phone that features a 4.3-inch high-resolution display, an



8-megapixel camera that records video to 1080p, a front-facing camera for video chat, and a dual-core processor. Less than a third-of-an-inch thick, the Razr is one of the thinnest 4G phones on the market. It also promises toughness, with a "splash-resistant" case made from Kevlar fiber.

This Droid is also billed as one of the first phones that can download HD video from Netflix and that comes ready to work with MotoCast, Motorola's own personal "cloud" service. That promises to enable you to share phone content as well as sync documents and calendars with your PCs. And like the Motorola Droid Bionic and Atrix, the Droid Razr has an optional laptop attachment (\$300).

That's not entirely due to the faster download speeds of 4G networks. 4G phones are also likely to have state-of-the-art processors that can provide fast performance even on 3G networks.

Another plus to 4G: It allows you to talk and surf the Web at the same time on all four major carriers; only AT&T and T-Mobile allow such multitasking on 3G networks.

Contrary to popular belief, not all 4G phones have notably short run times on a charge. Though 4G phones from Verizon and Sprint had lower scores for battery life than the carriers' 3G-only models, plenty of 4G phones from AT&T and T-Mobile scored very well in our battery tests.

Many more 4G models will be out later this year, possibly at lower prices, and more areas will have 4G coverage. And 4G service could be faster than it is now for AT&T and Sprint, which plan to shift from their current network technologies to LTE, the high-speed technology used by Verizon. (T-Mobile is on the HSPA network.) But if you use your phone mainly to talk and text, you won't get the benefits from 4G that a heavy data user will, so decide whether you need it.

Note, however, that the biggest data hogs who have grandfathered unlimited plans with AT&T and Verizon may see their data speeds clipped in months when their usage is high, in a controversial practice known as data-throttling.

**Screens.** Displays of 4 inches or larger are becoming more common, as are high-resolution screens that look better than ever, with bright, vivid colors.

**Cameras.** More phones than ever have 8-megapixel cameras and such big-camera features as ISO settings, tap to focus, and face detection. Two rated phones, the HTC Evo 3D and LG Thrill 4G, can capture subjects in 3D. One feature still missing, though, is optical zoom.

In addition to offering more features, the best phone cameras have very good photo quality, with little or no graininess, decent detail and color rendition, and a short shutter lag. And even run-of-the-mill phone cameras offer photos that are typically good enough for casual use.

A growing number of phones can shoot HD video at 1080p (so-called full high-definition) resolution, the best of them with video quality approaching that of the best pocket camcorders we've tested. (But even smart phones with better cameras and pocket camcorders can't match full-sized HD camcorders for image quality.)

## Voice—the forgotten function?

They may be smart but they're still phones. Why, then, do smart phones continue to earn mediocre scores, at best, for their most basic function?

Their middling voice quality means you may start to miss syllables or words as background noise increases—say, when you're on the street or at a party—though you should be able to hold a reasonably clear conversation under relatively quiet conditions. We expect better than that.

Another basic function, placing a call, has also become more of a challenge thanks to today's touch-screen interfaces. On most smart phones, phone controls

and keypads don't appear until you tap a phone-app icon. And the icon itself is rarely larger or more distinguishable than the other app icons that surround it.

Sometimes while you're on a call, an alert from another application might launch another screen, hiding your phone controls in the process.

BlackBerry smart phones are the exception. They almost always have a designated Send key for activating the phone and a corresponding key for hanging up. And you can program their physical keypads to function as speed-dial buttons, which is a nice plus.



## How to cut your phone bill

**1 Don't automatically buy from the company store.** Two-thirds of cell phones are bought at carrier stores, but our reporting suggests prices there can be higher than at warehouse stores, mass merchandisers such as Walmart, and electronics stores such as RadioShack. In fact, a carrier's walk-in stores can be even pricier than the company's own website. When we shopped for two dozen smart phones we recommended at 12 retailers in the San Francisco Bay area last October, the carrier stores for AT&T, Sprint, T-Mobile, and Verizon had the highest prices for more than three-quarters of the phones.

We've found phones to be especially inexpensive at Costco. But you may not find the exact model you want there—or at any retailer for that matter. All retailers don't sell phones for all carriers, and all models might not be available everywhere.

**2 Consider a low-priced carrier.** It's not easy to compare carriers' plans across or even within carriers, because their buckets of minutes, messages, and megabytes differ. But you can find competing plans that are similar enough to give you an idea of their relative value.

When we compared 100 plans to similar alternatives in 21 matchups covering the full spectrum of plans, both prepaid and standard, Consumer Cellular came out on top. It had the best deal most often—in more than one out of three cases. The next-best deals, in order, were from T-Mobile, Sprint, Metro PCS, Net10, Straight Talk, T-Mobile prepaid, and U.S. Cellular.

With savings that usually ranged from \$10 to \$40 a month over pricier rivals such as Verizon and AT&T, some of those carriers not surprisingly received higher reader marks for value in our service Ratings. But not every high-scoring carrier had the best prices, and you may not find many, if any, of the hottest smart phones in the model lineup of smaller and prepaid carriers.

**3 Use alternative services.** Bypassing the carrier and using third-party services for texting and voice calls can be a money-saver. But there are trade-offs.

Text messages, including a maximum 160 bytes of data, are outrageously priced à la carte by the carrier at 10 cents each. (Translated into data terms, that's about \$625,000 per gigabyte vs. the going rate of \$8 to \$40 per GB for wireless data plans.) International texts and texting while abroad can cost more—about 20 to 50 cents per message.

New apps such as Heywire and TigerText let you send text messages free over your data connection. Typically you use a special receiving phone number assigned to you by the service to avoid charges on your cell number. With most carriers, that means you won't have to pay your carrier 10 cents a pop or \$5 to \$30 a month for limited-to-unlimited messaging plans. (Data charges do apply if you text using the cellular data network rather than Wi-Fi, but that should have little impact on your bill because texts contain so little data.)

We tried both services on Android phones. Heywire worked fast and intuitively, and it's free—provided you accept fairly unobtrusive ads along the bottom of the message-thread page. But TigerText, whose selling points include private messages that self-destruct after a certain time, didn't work for us.

Skype Mobile lets you make free voice calls to other Skype subscribers in the U.S. and worldwide using your smart phone. That's especially helpful for international calls, which tend to be even pricier on cell phones than on landlines. Skyping uses your carrier's data service, so such calls don't count against your cell plan voice minutes, but these VoIP calls eat data at the rate of about 3 megabytes per minute. If you use Skype over a Wi-Fi network rather than on the carrier's network, you don't cut into your monthly metered data allocations.

**4 Max out on Wi-Fi.** Avoid using your plan's allotment of data by tapping into the rising number of Wi-Fi networks



that are available. Your home and work networks are obvious choices. But your cable company or Internet service provider might offer access to its own free, local Wi-Fi hotspots with your subscription, as does Time Warner Cable around the New York/New Jersey metro area and Comcast in the Philadelphia/New Jersey area.

You'll also find free public Wi-Fi hotspots at airports, libraries, universities, sports stadiums, and cafés. AT&T wireless customers can use 29,000 mostly free, unlimited Wi-Fi locations around the U.S., many of which are in more than 6,800 company-operated Starbucks and 11,500 McDonald's locations, free for all customers.

There's another way to limit data use on 4G phones, where faster network speeds can eat up your allotted monthly data more quickly. If you find that 3G speeds are just as good as 4G for activities such as texting or streaming music, set your 4G phone (via its Settings) to connect only to 3G.

**5 Investigate employee discounts.** AT&T, Sprint, T-Mobile, U.S. Cellular, and Verizon offer discounts to the employees of companies that use their service. To see whether you qualify, Google the carrier's name and "employee discount," and navigate to the Web page that asks for your work e-mail address. Discounts can be as high as 20 percent, though some deals exclude the iPhone or certain service plans.

### About your bills

Consumers have grown tired of a common gotcha that affects one in five cell service subscriber—"bill shock" from unexpectedly high charges. The surprises often occur because consumers are unaware that they've exceeded their plan's voice, message, or data limits and have begun to incur hefty overage charges.

In October, CTIA-The Wireless Association agreed that carriers should send customers alerts before high penalties

## 4G phones are very fast, but you don't need that speed to talk or text.

and fees begin piling up as a result of voice, messaging, or data overages and international roaming. At the same time, the Federal Communications Commission and

Consumers Union, the advocacy arm of CONSUMER REPORTS, agreed to work with the FCC on a website that will monitor compliance with the new industry guidelines.

Some carriers, including top-rated Consumer Cellular and U.S. Cellular, say they already provide data-overage alerts. Some smart phones, including iPhones, have a built-in feature that monitors your data usage, and apps from companies such as Pagedone offer the same capability on other phones.

Companies that market software to protect computers from viruses and other malware are stepping up their efforts to sell similar programs for cell phones, especially smart phones. While the risk of phones being infected may be rising as their Web access increases, we don't believe that it justifies installing yet another program at this time.

For most people, the possibility of losing a phone poses the greatest security risk. We urge the use of a password-protected screen or other measure to ensure that a lost phone cannot easily be accessed. The easiest way to protect data against loss is with a personal identification number (PIN) or password.

When you pay your phone bill, you pay a fee to the Universal Service Fund, which subsidizes phone service, and now also broadband access, in rural, underserved areas. The FCC, in late 2012, will direct more funding into broadband development in remote locations. The agency says that the Universal Service fee will not be increased due to the change.

Despite the rollout of 4G networks, rising demand for wireless broadband is expected to outstrip network capacity, and the search is on for ways to expand network access and speeds. The FCC is supporting legislation that would allow the agency to pay broadcasters for relinquishing TV spectrum that could then be auctioned for wireless broadband use.

# Android vs. iPhone

## Which is best at what's new

**The most important determinant of what a smart phone can do, and how well it can do it, is its operating system. While Windows Phone and, even more so, BlackBerry have a significant presence, two rivals dominate the OS market: Apple, with its three models of iPhone (the new 4S along with the 4 and 3G S), and Google's Android, with dozens of phones from a host of manufacturers. Here's how those two titans compare on key attributes:**

### ■ Advantage: Android

**Large displays.** Back in 2007, iPhone's 3.5-inch display was one of the largest, brightest, and sharpest you could get, and its recent color and resolution upgrades have been impressive. But the larger (4.3 inches and up) and equally dazzling screens on Android phones from HTC, Motorola, Samsung, and other makers seem better suited to the Web pages, games, and videos that users are increasingly accessing from their phones.

**Navigation.** Android phones offer free, spoken, turn-by-turn directions and traffic updates out of the box via Google Maps Navigation software. To get comparable performance and convenience, iPhone users have to shell out \$40 to \$50 for a navigation app from TomTom, Navigon, and others. But those aftermarket iPhone apps have an advantage: Their maps are stored on the

phone, so you can navigate even when you lack good cellular reception. (Next month's issue will include Ratings of the newest versions of those apps.)

**Web browsing.** Apple has its pluses here, including a "reader" mode built into the Safari browser of the new iOS 5 operating system. You can tap it to read articles without the clutter of ads and other graphics and to save articles to read later.

### Customization of the interface.

Apple's interface is fairly fixed, albeit in a highly intuitive manner, but the Android platform can be customized. Phone makers can tweak the interface, carriers can install apps, and users can customize a phone's look and feel using widgets and other tools. For example, some blend updates from friends on Facebook, Twitter, and other social networks, and others manage all of your phone's wireless connections.

**4G compatibility.** More than a dozen Android smart phones support this technology, far more than any other platform. Technically, only the AT&T version of the iPhone 4S supports 4G; it runs on the carrier's HSPA+ network.

**Shopping by phone.** Android and Apple have apps that allow you to check the prices of products and other details by scanning bar codes or QR codes (those square blotches you might have seen in ads) using the phone's camera and a connection to the Web.

## The latest news on cell-phone radiation



**The controversy continues.** The Food and Drug Administration maintains that the weight of scientific evidence has not shown that low-level radiation from cell phones endangers anyone, including children and teenagers. And the Federal Communications Commission says all wireless phones sold in the U.S. meet government requirements that limit their radiation to safe levels. An FDA representative says the agency continues to monitor available research. But some studies have linked cell-phone radiation to health problems such as increased risk of brain cancer. Here's a roundup of recent developments:

■ **New studies but no consensus.** The World Health Organization's International Agency for Research on Cancer (IARC) in May 2011 classified cell-phone radiation as "possibly carcinogenic to humans" based on limited evidence. The

classification drew on an investigation published in the International Journal of Epidemiology involving 5,117 people in 13 countries (excluding the U.S.). The authors found no overall greater risk of brain tumors for long-term cell-phone users but "suggestions" of an increased risk at the highest exposures of 1,640 hours or more over 10-plus years, which might be due to biases and error, they said.

Elsewhere, a case-control study of 3,689 Swedes found the highest risk for malignant brain tumors among those who began using cell phones before age 20 and used them for more than 10 years. The finding, from the International Journal of Oncology, suggests that young people may be more susceptible to cell-phone radiation than older users.

However, researchers studying European children and adolescents found no statistically significant differences in brain tumor risk between cell-phone users and non-users, as





However, only Android has the Google Wallet app, which allows you to make a purchase using your smart phone as though it were a digital credit card. Use of that app is limited to a handful of phones with near-field communications (NFC) capability. Phones in our Ratings with that feature include the Sprint version of the Samsung Nexus S 4G, the HTC Amaze 4G, and the T-Mobile Samsung Galaxy S II. The carrier must offer the service (now only Sprint does), and merchants must be in the MasterCard PayPass network, which operates in 150,000 U.S. locations.

## ► Advantage: iPhone

**Selection of apps and entertainment.** No contest. Not only does Apple have the most apps, games, songs, movies, and other forms of entertainment for download but its platform also makes it very easy to pay for them—via

your iTunes account. On Android phones, payment arrangements are often between you and the individual app seller, which means you're giving your credit-card number to multiple sources instead of to just one.

**Cloud computing.** Android is the true pioneer when it comes to syncing contacts, calendars, apps, and other phone-based elements via the Web and intelligently linking them with Web-based data such as maps, social networks such as Facebook and Twitter, photos, search-engine results, and more. Apple's iCloud feature takes the game to a whole new level, giving users 5 gigabytes of

free storage on its servers, to which they can upload photos, music, documents created with apps from Apple or third parties that support iCloud, and more that can be accessed by up to 10 devices on one iTunes account. Ditto for most apps and content, including videos and books bought from Apple, which don't count against your limit. To get more storage for non-Apple files, you'll have to pay up to \$100 a year for 50GB. Both Google and Apple have new services that use the cloud to stream music, but it's premature to compare them, because Google's app is still in beta.

**Consistent and intuitive interface and "ecosystem."** Apple sustains a familiar, highly intuitive interface across its various devices and programs. That aids in the sharing and integration of tasks across your digital life, especially if you own various Apple devices.

**Voice assistance.** While Android efficiently allows users to perform universal searches, launch apps, and even dictate and send messages through voice commands, Apple now offers all that and more with its built-in Siri voice-activated assistant. Currently available only on the iPhone 4S, Siri not only understands and executes requests but speaks back to you, in a female voice. Tell Siri to remind you about an appointment, and she'll set it up in the calendar after confirming with you that she got it right.

Siri sometimes demurs from speaking when you ask her questions involving calculations, such as, "Convert 42 pounds into ounces." But she's smart enough to show you the correct answer—in this case, 672 ounces—on her display.

reported in the *Journal of the National Cancer Institute*. They did observe an increase in brain tumors but lacked enough cases to confirm that it was a statistically significant effect.

Low-level radiation from cell phones can affect brain function during short-term use, according to a February 2011 report in the *Journal of the American Medical Association*. The study, by researchers at the National Institutes of Health and the Brookhaven National Laboratory, suggests a new biological effect linking cell-phone radiation and increased brain glucose metabolism. It's unknown whether that could be harmful. The FCC states that cell-phone radiation has been associated with heating of human tissue, which may be linked to adverse health effects.

An October 2011 report in the *British Medical Journal* found no link between long-term cell-phone use and cancer among Danish mobile-phone users. But our experts

said the study had shortcomings, including that a potentially high-use cell-phone population was categorized as non-users.

**► Doubts about radiation stats.** Cell-phone packaging can have information about specific absorption rate (SAR) values. The higher the SAR value, the more radiation the body theoretically absorbs. But SAR values indicate the maximum possible exposure from a given phone, not the varying levels of exposure in normal use, the FCC says. So you won't necessarily absorb less radiation from a phone with a lower reported SAR value than one with a higher value, and SAR values can't be used to reliably compare cell-phone models.

Further, a team of investigators reported that SAR figures do not "adequately protect" most people who use cell phones, especially children, who absorb more cell-phone radiation than adults, according to an October 2011

article in the journal *Electromagnetic Biology and Medicine*. Commenting on that report, an FCC official told us the agency will "evaluate the merits of reports" such as this.

## ► Continuing calls for more research.

CTIA-The Wireless Association supports calls for more research to clearly identify any potential health risks from the use of cell phones. The IARC announcement of a possible carcinogenic effect of phone use concluded "we need to keep a close watch for a link between cell phones and cancer risk."

**Bottom line.** If you're concerned, here's how to minimize exposure to phone radiation:

- Reduce cell-phone use, especially by kids.
- Hold the phone away from your head and body, especially when a call is connecting.
- Text or use a speakerphone or headset to reduce absorption in your head.



# Which phone & plan for you?

Combinations to suit a range of needs

## ▣ You require only the basics

Like 34 percent of readers in our survey, you never or rarely access websites or e-mail from your phone, which you use almost exclusively for voice calls and, probably, texting.

**Leading option:** A plan with less than 450 minutes per month at a reasonable price from a carrier with decent reader scores. If you send and receive more than a couple of dozen text messages per month and want to avoid overpaying à la carte, you should also consider a messaging bundle or a free texting app (see “How to cut your phone bill,” on page 31).

Alternatively, you can opt for no plan at

all. If you're like the 24 percent of readers who made only one or no calls on a typical day, consider prepaying for minutes and texts on an as-needed basis. Though the cost per minute or text may be relatively high, prepaying will probably still be less expensive than almost all traditional plans because your usage will be lower than the minimum for those plans.

Whether you go traditional or prepaid, choose the provider and service first and the phone second—a simple flip- or slider-styled phone. Pay no more than about \$50 for the phone, and avoid smart phones and so-called feature phones, fancier conventional phones sold by some carriers.

With smart phones, you must pay \$15 or more per month for a data plan, which you won't need for voice calls and texting.

**Service:** If you're toward the higher end of “basic”—say, with 150 minutes or texts, or both, per month—consider Consumer Cellular, a national carrier that received our highest rating for value. It operates on the AT&T network and aims at older users with fairly basic cellular needs.

Consumer Cellular offers short-term contract options and bills you monthly like a traditional cell carrier does, which is less complicated than a prepaid arrangement. For example, you can buy a plan with 300 minutes per month for \$20, inexpensively add a second line for your spouse (\$10 per month), and get 100 text messages (and a small data package, for checking the Web two to four times a week—up to 4 megabytes of data) for only \$2.50 more per month. (Prices and plan specifics for all plans was as of press time.)

If you're a true cell minimalist, consider TracFone, among the better prepaid carriers in our Ratings. Its options include buying 60 minutes of airtime for \$20 that you can take up to three months to use, essentially giving you basic cell service for less than \$7 per month.

**Phones:** With Consumer Cellular, choose the Doro PhoneEasy 410, which has large buttons and other features the carrier says make it easier for seniors to use, or the Motorola WX345, which has outstanding battery life. With TracFone, the LG 420G also offers exceptional talk time (more than 7 hours) on a battery charge.

## ▣ You want to ‘smarten up’

You're like the 18 percent of our readers who said they don't yet own a smart phone but want one. You're not stuck on getting a big-name model with the latest features, you're not yet sure how much you'll use a phone for e-mail and other data services, and you'd happily sacrifice some pizzazz for a lower monthly bill—no more than \$80 per month, including voice, texting, and data service.

**Leading option:** A less sophisticated,

## ▣ CHECK OUT OUR VIDEO

On your smart phone, download the ShopSavvy or the RedLaser app, then scan the code at right. Or go to [www.ConsumerReports.org/smartphonebuy](http://www.ConsumerReports.org/smartphonebuy).





modestly priced, competent smart phone from a low-priced carrier with decent, though not necessarily top, scores for data service. A plan that doesn't force you to overpay for a high level of data downloads you might not need.

**Service:** U.S. Cellular, a regional carrier that operates mostly in the Midwest, scored above average for value. If the carrier is available to you, consider its Single Line Primary Plus plan (\$80 for 450 minutes, unlimited messaging, and 5 gigabytes of data) or for even less, its prepaid plans (450 minutes, unlimited messaging, and 2GB of data for \$60 or 200MB for \$40 per month).

Among national carriers, Sprint's Everything Data plans are relatively inexpensive and include one line for \$80 per month (450 minutes and unlimited data and messaging).

**Phones:** The BlackBerry Bold 9650, available from U.S. Cellular, is inexpensive and capable. With Sprint and Credo, value choices include the Samsung Replenish, free from each carrier with a two-year plan; see the smart-phone Ratings for details.

## ▶ You want it all

You're similar to the 41 percent of CONSUMER REPORTS readers in our survey who accessed the Web or e-mail at least five times a day, or the half or so that used apps in the past month, including Facebook and other social-networking tools. Although you don't want to overpay for service, you're willing to spend \$100 or more per month for fast, widespread coverage for your phone.

**Leading option:** A new top-of-the-line Android phone or iPhone, to enjoy the widest selection of apps. A carrier with satisfying data service, including an ample (even unlimited) data plan, perhaps on a fast 4G network.

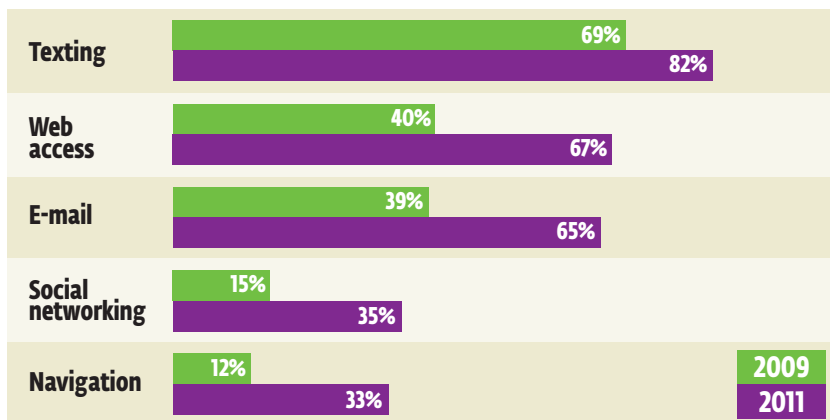
**Service:** Standard service (billed monthly, often under a contract) from a major national carrier is most likely to allow you to get the kind of phone you want.

Among the four major carriers, Verizon and Sprint offered more satisfying data service, according to readers. Sprint does so more economically with its Simply Everything plan, which includes unlimited data, voice, and texts and costs \$110 for smart phones. By comparison, Verizon charges new customers \$120 for unlimited voice and texting with a 2GB data limit. A data hog might need several more gigabytes per month, which cost \$10 per gigabyte.

## ▶ CLOSE-UP

# What a difference a few years make

More than 60 percent of readers we surveyed now own a smart phone; most bought theirs in the past two years. Those facts help explain the dramatic changes in the percentage of readers who did the tasks below, many of which require a smart phone. Readers aren't necessarily talking less on their phones; they're using them in a lot more new ways.



Source: 2009 and 2011 Annual Cell Phone Service Surveys, Consumer Reports National Research Center.

**Phone:** Any of the high-rated recommended Verizon and Sprint models from our smart-phone Ratings should suit you. They include the Apple iPhone 4S (available on both carriers) and the top-rated 4G models—the Samsung Galaxy S II Epic 4G Touch (Sprint), Motorola Photon 4G (Sprint), and Motorola Droid Bionic (Verizon).

## ▶ You're buying for a crowd

You're a family, or a couple, that makes lots of voice calls and texts, often to one another. Different family members have varying priorities—say, texting for the teens, streaming sports video for Dad, and mobile banking for Mom.

**Leading option:** A family plan, which more than two-thirds of cell-phone users have, mainly because it probably saves money compared with multiple single-line accounts. If you need four cell lines, for example, a family plan can save through shared minutes, add-a-line prices, and free in-network calling between spouses and the kids.

**Service:** A major carrier that bills monthly will give you the widest choice of services with family savings. If it's available in your area, U.S. Cellular provides better than average value, our readers said. Its Family Basic plans let you start with a sufficient level of minutes for most families and add text or data—or not—as needed per line.

Our readers rated Sprint only average on value but better than Verizon, T-Mobile, and AT&T. Sprint offers multiline economy in its family plans and the option of unlimited and potentially lower-priced data. Verizon got the best text rating of the major carriers. Sprint and Verizon tied with better data ratings among the big four carriers.

Some higher-rated possibilities may disappoint. Consumer Cellular wouldn't be a good option for family members with big data needs; its plans have low data limits and its smart-phone selection is very limited. Credo, which uses the Sprint network, is generally more expensive than Sprint—\$25 more per month, for example, for 1,400 to 1,500 minutes and unlimited messaging and data. So why pay more?

No-contract carrier Walmart Family Mobile is a great deal if all you need is unlimited voice and text; it delivers a \$70 per month savings over the majors for a family who needs two lines. But its data plan (WebPak) is overpriced at \$40 per gigabyte, even if all family members can share it and it doesn't expire until it's used up.

**Phones:** Because family needs can be diverse, no single model of phone may be suitable for everyone who will share the plan; consult the Ratings. That said, if the needs of several family members are close enough, two-for-one sales can deliver substantial savings on phones.

Overview Cell-phone service

Standard cell-phone service, involving a bill at the end of the month, is best if you want a sophisticated smart phone and are prepared to accept a contract. Prepaid service, either pay-as-you-go or plans with a monthly-minute allocation, are usually contract-free and offer basic phones and simpler smart phones.

Best major carriers:

- A2 U.S. Cellular
- A4 Verizon Wireless
- A5 Sprint

These are the highest-scoring of the big six carriers for full-featured, standard service. **A2** has a coverage map that's nationwide, but its service area is limited to 26 mostly Midwest states; it's a standout in almost every respect. **A4** has an edge over **A5** in texting and in knowledgeable staff, but **A5** rated better in value.

Fine choice if a socially responsible carrier is a priority:

- A3 Credo

This carrier, formerly known as Working Assets, donates a portion of its income to social causes. While we lacked sufficient data to formally score certain attributes, it seems to offer satisfying service. Relatively high prices don't seem to hurt its value score.

Best choices if your phone and service needs are fairly basic:

- A1 Consumer Cellular
- B1 TracFone

These specialize in no-frills cell phones and service. **A1** is a short-term contract, standard carrier aimed at seniors that offers standout customer service and adequate voice service. **B1** is a prepaid carrier that offers very inexpensive plans for minimal phone users. **A1** uses AT&T's network and **B1** uses it with some of its phones. The carriers' relatively basic phones aren't likely to place heavy demands on its data component, which AT&T customers found to be a weak point.

Best prepaid values:

- B1 TracFone
- B2 Straight Talk
- B3 T-Mobile
- B4 Virgin Mobile

These carriers, whose overall scores are not meaningfully different, operate on major carrier networks (see the cell-phone Ratings, on page 40), often for less. The per-minute cost of **B1** is ostensibly high, but double- or triple-minutes-for-life cards cut that accordingly, and value-plan minutes are reasonably priced. **B2** offers unlimited voice, text messages, and Web access for \$45 per month. **B3** lets you buy primarily what you want with plans emphasizing mostly data, text, or talk. **B4** sells Beyond Talk unlimited Web, talk, and text for markedly less than parent company Sprint's Simply Everything.



Ratings Cell-phone service overall

Summary Ratings, reflecting all cities surveyed, in order of overall score. Differences in score of less than five points are not meaningful.

Order	Provider	Reader score	Service satisfaction				Customer support		
			Value	Voice	Texting	Data	Phone	Staff knowledge	Issue resolved
		0100							

A STANDARD SERVICE Billed at month's end, often under a contract.

1	Consumer Cellular	87	●	○	—	—	●	●	●
2	U.S. Cellular	84	●	●	●	●	●	●	●
3	Credo	78	○	○	—	—	—	—	—
4	Verizon Wireless	73	●	○	●	●	○	●	○
5	Sprint	72	○	○	○	●	○	○	○
6	T-Mobile	67	●	●	○	○	●	○	○
7	AT&T	59	●	●	○	●	●	○	○

B PREPAID SERVICE Billed in advance, without a contract.

1	TracFone	82	●	○	●	○	●	●	○
2	Straight Talk	78	●	○	○	—	—	—	—
3	T-Mobile	78	●	○	○	○	●	○	○
4	Virgin Mobile	78	●	○	○	○	●	●	○
5	Net10	75	○	○	—	—	—	—	—
6	Verizon Wireless	75	○	○	○	●	●	○	○
7	Metro PCS	71	○	●	●	—	—	—	—
8	AT&T GoPhone	67	●	●	●	●	●	○	○

T-Mobile allows you to buy phones in two ways

Consumers with cell-phone contracts have long paid for "free" or deeply discounted phones through hidden monthly fees built into their one- to two-year service contracts. Those fees invariably continue even after the phone has been paid off.

T-Mobile has added transparency when it comes to those fees, and it has done so in a way that saves money. If you buy a new phone with one of the carrier's Value plans, which are low-priced versions of its Classic plans, you make a down payment plus a monthly installment of \$3 to \$15 to pay back the full retail price of the phone. The fee is in addition to the monthly service fee and is imposed for 20 months.

Though that might sound unappealing, it's positive in two ways: The Value plans are priced so low that your total monthly bill is usually less than with the matching Classic plan, even with the added phone fee. And the bill becomes lower once the 20-month payback period ends and the fee is removed.

That can spell significant savings. When we ran the math on the HTC myTouch 4G Slide, comparing individual two-year plans with unlimited talk and text and 2 gigabytes of data, the Value plan was \$200 less than the Classic plan over two years and almost \$500 less over three years. Those totals include the up-front cost of the phone (\$200 with the Value plan, \$250 with the Classic) and the Value-plan phone time payments.

**Bottom line.** Comparing the Value and Classic plans and phone prices can be complicated. But we think it might be worth the effort, especially for people who keep a phone past the contract's expiration date.

T-Mobile's transparency is a welcome step toward a more straightforward and honest approach to cell-phone pricing.















# Ratings Cell service by city

In order of reader score, within 22 metropolitan areas. Differences in reader score of less than six points are not meaningful.













Better     Worse

Provider	Reader score	Service
	0 100	Voice Texting Data













## ATLANTA

Verizon	74	  
Sprint	74	  
T-Mobile	70	  
AT&T	56	  
















## AUSTIN, TEXAS

T-Mobile	74	  
Sprint	72	  
Verizon	72	  
AT&T	61	  













## BOSTON

T-Mobile	70	  
Verizon	69	  
Sprint	68	  
AT&T	60	  













## CHICAGO

U.S. Cellular	84	  
Verizon	73	  
T-Mobile	69	  
Sprint	68	  
AT&T	55	  










## DALLAS-FORT WORTH

Verizon	76	  
Sprint	73	  
T-Mobile	69	  
AT&T	65	  

## DENVER













Sprint	72	  
Verizon	72	  
T-Mobile	66	  
AT&T	56	  

## DETROIT













Verizon	73	  
Sprint	67	  
AT&T	63	  

Provider	Reader score	Service
	0 100	Voice Texting Data













## HOUSTON

Verizon	77	  
Sprint	71	  
T-Mobile	69	  
AT&T	59	  













## KANSAS CITY

Sprint	79	  
Verizon	74	  
T-Mobile	68	  
AT&T	66	  










## LOS ANGELES

Verizon	73	  
Sprint	69	  
T-Mobile	67	  
AT&T	56	  













## MIAMI

Verizon	74	  
Sprint	74	  
T-Mobile	70	  
AT&T	61	  













## MILWAUKEE

U.S. Cellular	85	  
Verizon	74	  
AT&T	60	  

## MINNEAPOLIS-ST. PAUL













T-Mobile	73	  
Sprint	71	  
Verizon	71	  
AT&T	60	  

## NEW YORK













Verizon	71	  
Sprint	69	  
T-Mobile	66	  
AT&T	57	  

Provider	Reader score	Service
	0 100	Voice Texting Data













## PHILADELPHIA

Verizon	71	  
Sprint	71	  
T-Mobile	66	  
AT&T	63	  













## PHOENIX

Verizon	76	  
Sprint	71	  
T-Mobile	68	  
AT&T	62	  













## SAN DIEGO

Verizon	74	  
Sprint	73	  
T-Mobile	72	  
AT&T	60	  










## SAN FRANCISCO

Verizon	73	  
Sprint	71	  
T-Mobile	69	  
AT&T	53	  













## SEATTLE

Verizon	72	  
Sprint	72	  
T-Mobile	71	  
AT&T	59	  













## ST. LOUIS

Sprint	74	  
Verizon	73	  
AT&T	64	  

## TAMPA, FLA.

Sprint	74	  
Verizon	73	  
T-Mobile	71	  
AT&T	67	  

## WASHINGTON, D.C.

Sprint	73	  
Verizon	71	  
T-Mobile	70	  
AT&T	60	  

## Guide to the Ratings

Ratings are based on responses from 66,315 ConsumerReports.org subscribers with cell-phone service surveyed in September 2011. In the **overall Ratings, standard** customers said they receive a bill after each month of service; **prepaid** customers said they prepay for service as needed. While some providers may offer one or both types of service, only providers for which we had sufficient data of the specified type are included in the table. The **Ratings by city** show all providers with sufficient data in each locale, including standard and prepaid customers. In some cases, carriers whose service is available in certain cities may not be rated for them. In both charts, "—" indicates insufficient data. **Reader score** refers to how respondents rated their overall satisfaction with their cell-phone service and is not limited to the factors rated. A score of 100 would mean all respondents were completely satisfied; 80 very satisfied, on average;







C3 HTC Amaze 4G



D2 Samsung Infuse 4G



D3 LG Thrill 4G

☒ Recommended

● Excellent ● Very good ○ Good ● Fair ● Poor

Rec.	Rank	Brand & model	Price	Available as prepaid	Overall score	Test results							Features			
		Similar models are listed in small type with their price.		0	100	Display	Ease of use	Voice quality	Phoning	Messaging	Web browsing	Camera	Battery life	Display size (in.)	Camera (megapixels)	Broadband 4G data
				P	F	G	V	G	E							

## C T-MOBILE continued

<input checked="" type="checkbox"/>	4	T-Mobile G2x	\$ 0	●	76	●	●	○	●	●	●	●	●	4.0	8.0f	●
<input checked="" type="checkbox"/>	5	HTC Sensation 4G	200	●	75	●	●	○	●	●	●	●	●	4.3	8.0f	●
<input checked="" type="checkbox"/>	6	T-Mobile Sidekick 4G	80	●	75	●	●	○	●	●	●	○	●	3.5	3.1	●
<input checked="" type="checkbox"/>	7	T-Mobile myTouch 4G	100	●	74	●	●	○	●	●	●	○	●	3.8	5.1f	●
<input checked="" type="checkbox"/>	8	HTC myTouch 4G Slide	200	●	73	●	●	○	●	●	●	○	●	3.7	8.0f	●
<input checked="" type="checkbox"/>	9	Motorola Cliq 2	100	●	73	●	●	○	●	●	●	○	●	3.7	5.0f	●
<input checked="" type="checkbox"/>	10	Samsung Nexus S	0	●	72	●	●	○	●	●	●	○	●	4.0	4.9f	●
<input checked="" type="checkbox"/>	11	BlackBerry Bold 9900 4G	300	●	69	○	●	○	●	●	●	○	○	2.8	4.9f	●
<input checked="" type="checkbox"/>	12	HTC myTouch 3G Slide	50	●	65	○	●	○	●	●	●	○	○	3.4	5.1f	●
<input checked="" type="checkbox"/>	13	HTC HD7	100	●	65	●	●	○	●	●	●	○	●	4.3	5.0f	●
	14	HTC Wildfire S	0	●	64	○	●	○	●	●	●	○	○	3.2	5.1f	●
	15	BlackBerry Bold 9780	110	●	63	○	○	○	●	●	●	○	○	2.4	5.0f	●

## D AT&T This carrier scored the lowest in satisfaction in almost all cities in our survey.

<input checked="" type="checkbox"/>	1	Samsung Galaxy S II	200	●	80	●	●	○	●	●	●	●	●	4.3	8.0f	●
<input checked="" type="checkbox"/>	2	Samsung Infuse 4G	100	●	80	●	●	○	●	●	●	●	●	4.5	8.0f	●
<input checked="" type="checkbox"/>	3	LG Thrill 4G	100	●	77	●	●	○	●	●	●	○	●	4.3	5.0f	●
<input checked="" type="checkbox"/>	4	Apple iPhone 4S (16GB) (32GB), \$300; (64GB), \$400	200	●	75	●	●	○	●	●	●	○	●	3.5	8.0f	●
<input checked="" type="checkbox"/>	5	Motorola Atrix 4G	100	●	75	●	●	○	●	●	●	○	●	4.0	5.0f	●
<input checked="" type="checkbox"/>	6	HTC Inspire 4G	100	●	74	●	●	○	●	●	●	○	○	4.3	4.9	●
	7	Apple iPhone 4 (8GB)	100	●	73	●	●	○	●	●	●	○	○	3.5	4.9f	●
<input checked="" type="checkbox"/>	8	Samsung Captivate	0	●	73	●	●	○	●	●	●	○	○	4.0	3.1	●
<input checked="" type="checkbox"/>	9	BlackBerry Torch 9810	50	●	71	●	○	○	●	●	●	○	○	3.2	5.0f	●
<input checked="" type="checkbox"/>	10	Apple iPhone 3G S	0	●	69	●	●	○	●	●	●	○	○	3.5	5.0f	●
<input checked="" type="checkbox"/>	11	BlackBerry Torch 9800	30	●	66	●	○	○	●	●	●	○	○	3.2	3.1	●
<input checked="" type="checkbox"/>	12	HTC HD7S	100	●	65	●	●	○	●	●	●	○	○	4.3	4.9f	●
	13	LG Phoenix	0	●	64	○	○	○	●	●	●	○	○	3.2	3.1f	●
	14	Samsung Focus	50	●	63	●	○	○	●	●	●	○	○	4.0	3.1	●
	15	LG Quantum	50	●	62	●	○	○	○	●	●	○	○	3.5	5.1f	●
	16	Pantech Crossover	0	●	62	○	○	○	○	○	○	○	○	3.0	5.1	●
	17	HTC Status	0	●	61	○	○	○	○	○	○	○	○	2.6	1.9f	●
	18	HP Veer 4G	0	●	60	○	○	○	○	○	○	○	○	2.5	5.1	●
	19	Palm Pixi Plus	0	●	56	○	○	○	○	○	○	○	○	2.6	1.9f	●

\* Available from Credo Mobile, which uses the Sprint network.

applications while on a call. **Web browsing** mainly assesses browser capabilities, including multitouch, Flash video, link selecting, and the phone's ability to handle more than one browser and multiple Web pages. It also considers data connections, such as 3G, 4G, and Wi-Fi. **Camera** considers still-picture quality and shutter lag, features, and messaging capabilities; in **camera (megapixels)** column, an "f" indicates flash. **Battery life** was tested under strong and weak cell-network signals and while performing various tasks. **Broadband "4G" data** indicates models considered 4G based on carriers' definitions. **Price** is based on a two-year contract in October 2011 from the indicated carriers, including rebates. Scores may differ from past Ratings due to updates to our testing and changes in phone firmware.

## Overview continued

The models below, without letter-number codes, are for smaller carriers not in the Ratings.

### Fine choice for Consumer Cellular:

**Motorola Bravo** \$165

This relatively lightweight phone has a high-resolution 3.7-inch display and a decent 3.1-megapixel camera. But it lacks the handy search key found on most Android phones.

### Fine choices for Credo Mobile:

**Samsung Conquer 4G** \$80

This fine Android phone has a 3.5-inch display and a decent 3.1-megapixel camera.

**Samsung Replenish** \$30

This Android phone has a smallish 2.8-inch display, a tiny physical keypad, and a decent 1.9-megapixel camera.

### Fine choices for U.S. Cellular:

**Motorola Electrify** \$200

A 3G sibling of the high-rated Motorola Photon 4G in the Ratings.

**HTC Merge** \$150

This Android model has a 3.8-inch display and a slide-out keyboard.

### Fine choices for BlackBerry users:

**BlackBerry Torch 9850** \$200 (U.S. Cellular)

Like newer BlackBerrys, this has a touch-screen display, the largest we've seen at 3.7 inches, but lacks the usual physical keyboard.

**BlackBerry Style 9670** \$100 (Credo Mobile)

A pocket-friendly phone with a very good 5.0-megapixel camera and 2.7-inch display.

**BlackBerry Bold 9650** \$130 (U.S. Cellular)

This model has a smallish 2.4-inch display.

**BlackBerry Curve 3G 9330** \$0 (Credo Mobile)

This phone has a smallish 2.4-inch display and a decent 1.9-megapixel camera.

**BlackBerry Curve 8530** (MetroPCS, \$150; Virgin Mobile, \$180)

This model has a smallish 2.4-inch display.

### Fine choices for Virgin Mobile:

**Motorola Triumph** \$300

This has a large 4.1-inch display but doesn't let you view Word and Excel files out of the box, as you can with most Android phones.

**Samsung Intercept** \$100

This Android phone has a slide-out keyboard and a 3.2-inch display.

### Fine choice for Walmart Family Mobile:

**Motorola Cliq XT** \$200

This Android phone has a 3.1-inch display and a customizable Motoblur interface that links related applications on the home screen.

## Overview Cell phones

This Ratings comprises models available mainly without a contract, an arrangement we think is suitable for many people who use a cell phone. Most models are available with prepaid service and are listed with the prepaid price. However, Consumer Cellular's phones are offered with standard (billed) service with a short-term contract. Many phones listed for AT&T and Verizon are available with a contract for less than the prepaid price shown. We've identified phones below that have special suitability for some users.

### For long battery life:

**C2 Motorola WX345** (Consumer Cellular) \$0

**D1 LG 420G** (Straight Talk) \$30

**E1 Samsung Gravity TXT** (T-Mobile) \$140

**F1 LG 420G** (TracFone) \$20

**F2 Samsung T301G** (TracFone) \$20

**H1 LG Rumor Touch** (Virgin Mobile) \$100

All of these phones have very good or excellent battery life and should offer talk times upward of 5 hours on a charge.

### If simplicity is paramount:

**C1 Doro PhoneEasy 410** (Consumer Cellular) \$25

This phone has big buttons and other features for easy operation, such as an emergency-call feature that alerts family members.

### Tops for texting:

**B2 Sanyo Innuendo** (Boost) \$130

**G2 LG Octane** (Verizon) \$250

**H1 LG Rumor Touch** (Virgin Mobile) \$100

Exceptional keyboards make this trio tops for texting. Also consider four with very good keyboards: the A2 Pantech Impact, B1 Samsung Seek, E1 Samsung Gravity TXT, and G1 LG Cosmos Touch.

### For toughness:

**A4 Samsung Rugby II** (AT&T GoPhone) \$230

This ruggedly built phone is designed to withstand harsh conditions.



A4  
Samsung  
Rugby II



B2 Sanyo  
Innuendo



C1 Doro  
PhoneEasy  
410



E1 Samsung  
Gravity TXT



F1 LG  
420G

## Ratings Cell phones

In alphabetical order, within carriers.

	Brand & model	Price	Test results		Features					
			Voice quality	Battery life	Display (in.)	Camera (megapixels)	Touch screen	Keyboard Virtual	Physical	Voice command Preset messages

### A AT&T GOPHONE These use AT&T's network.

1	HTC FreeStyle	\$270	○	○	3.2	3.1	•	•	•	•
2	Pantech Impact	200	○	○	2.6	1.9			•	•
3	Pantech Link	60	○	○	2.4	1.3			•	•
4	Samsung Rugby II	230	○	●	2.2	1.9				•
5	Samsung Solstice II	180	○	○	3.0	1.9	•	•	•	•
6	Samsung Strive	120	●	●	2.6	1.9			•	•

### B BOOST These use Sprint's network.

1	Samsung Seek	80	○	○	2.6	1.2	•	•	•	•
2	Sanyo Innuendo	130	○	●	2.8	3.1	•	•	•	•

### C CONSUMER CELLULAR These use AT&T's network.

1	Doro PhoneEasy 410	25	○	○	2.0	NA				
2	Motorola WX345	0	○	●	1.7	1.9				•

① Also available with standard (billed) service from Credo Mobile, which uses the Sprint network.  
② Tested on AT&T network; can be used on T-Mobile network with a different SIM card.

## Guide to the Ratings

These phones were assessed on only two key attributes, so there is no overall score; models are listed alphabetically within carriers. **Voice quality** considers listening and talking in noisy and quiet environments. **Battery life** represents tests under strong and weak cell-network signals, including battery consumption performing various tasks. **Display size** is diagonal, in inches. **Touch screens** are of the single-touch type, except for A1, which is multitouch and so lets you pinch

● Excellent ● Very good ○ Good ● Fair ● Poor

	Brand & model	Price	Test results		Features					
			Voice quality	Battery life	Display (in.)	Camera (megapixels)	Touch screen	Keyboard Virtual	Physical	Voice command Preset messages

### D STRAIGHT TALK This uses AT&T's network.

1	LG 420G	30	○	●	1.8	0.3				•
---	---------	----	---	---	-----	-----	--	--	--	---

### E T-MOBILE These use T-Mobile's network.

1	Samsung Gravity TXT	140	○	●	2.4	1.9			•	•
2	Samsung Smiley t359	50	○	○	2.6	1.2			•	•

### F TRACFONE These use AT&T's network.

1	LG 420G	20	○	●	1.8	0.3				•
2	Samsung T301G	20	●	●	2.0	0.3				•

### G VERIZON These use Verizon's network.

1	LG Cosmos Touch	210	●	○	2.8	1.2	•	•	•	•
2	LG Octane	250	●	○	2.6	3.1			•	•

### H VIRGIN MOBILE This uses Sprint's network.

1	LG Rumor Touch	100	○	●	3.0	1.9	•	•	•	•
---	----------------	-----	---	---	-----	-----	---	---	---	---

to zoom in or out of Web pages or photos. **Voice command** allows dialing from the phone contacts by speaking a name or by saying digits, without training the phone. Preset messages are texts that can be customized or selected from a list. **Price** is prepaid without a contract; some phones may also be available with postpaid plans (and often contracts) from AT&T, Consumer Cellular, T-Mobile, and Verizon.







**LIGHTS OUT** Project leader John Banta checks for burned-out bulbs in our labs.

## All about lightbulbs

How many lightbulbs does it take to change your utility bill? Just one CFL can save you around \$50 over its lifetime, and LEDs can save you more than twice that. Here's the scoop:

### Q. Have CFLs really improved?

Our early tests of 100-watt-equivalent CFLs found that they might not be as bright as the incandescents they replace. (Look for full Ratings of 100-watt-equivalent CFLs and halogen bulbs next month.) But Energy Star-qualified 60-watt equivalents are as bright as regular incandescents, use about 75 percent less energy, and last seven to 10 times longer. But they still need time to fully brighten, and most aren't dimmable.

### Q. Should I stick with halogen bulbs?

Some use about 25 to 30 percent less energy than standard incandescents, but they cost more and many don't last much longer. So you're unlikely to save much money. But halogens instantly produce light, are fully dimmable, and cast light evenly. Look for the results of our tests of 100-watt halogen bulbs next month.

### Q. Why buy LEDs?

LEDs instantly brighten and aren't affected by frequent on/off cycles and cold temperatures, and many can be dimmed. They use slightly less energy than CFLs and are claimed to last

even longer, 20,000 to 50,000 hours, or around 20 to 40 years. LED prices are dropping, but the bulbs are still expensive and have a payback period of two years or longer. Not all lamp-type LEDs emit light evenly, so look at our Ratings and look for the Energy Star logo.

### Q. Why do LEDs cost so much?

Production is challenging and expensive, but as with other electronic-based products, prices are dropping as demand and performance go up. Until then, look online for rebates from manufacturers and utilities. You'll spend about \$1 a year on average to power an Energy Star LED or CFL, \$3.50 for a halogen, and almost \$5 for a traditional incandescent bulb, according to the Department of Energy.

### Q. Do LEDs contain toxins?

Semiconductor chips and electronic circuitry in LEDs can include lead, arsenic, and gallium, but those substances aren't accessible, even if the bulb breaks. LEDs should be recycled with other electronic waste. Used CFLs, which contain a small amount of mercury, can be taken to Home Depot, Lowe's, or Ikea for recycling.

### Q. Are any lightbulbs U.S.-made?

Most incandescents are manufactured abroad, and CFLs usually come from China. LED chips and final assembly might be done here, but only one of the 10 LEDs we tested was made in the U.S. LED research, development, and design are done here.

### Q. What's a lumen?

Brightness is measured in lumens; watts measure energy use. Here's a cheat sheet for equivalents: To replace a 40-watt incandescent lamp bulb, get 450 lumens; 60 watts, get 800 lumens; 75 watts, get 1,100 lumens; 100 watts, get 1,600 lumens.

## Match the bulb to the fixture for best performance

Incorrect use of an energy-saving bulb can affect its performance and shorten its life. So check the package for proper use, then consider these tips:

### ▣ Lamps and ceiling fixtures

Make sure the bulb can be used in a fully enclosed fixture, if that's what you have. Consider covered CFLs if you don't like the spiral look, but those bulbs take longer to warm up.

**Standouts from our tests:** EcoSmart 60 Watt Soft White 423-599 E55M8144 CFL, \$1.50, sold at Home Depot. It brightened faster than others we tested. GE Energy Smart Saf-T-Gard 60W 78961 CFL, \$10. The bulb has a protective coating that contains the pieces if it breaks—a plus if you're concerned about mercury exposure from a broken CFL. Philips AmbientLED 12.5W 12E26A60 60W, \$25. The dimmable bulb outperformed all other tested bulbs.

### ▣ Recessed or track lights

The interior color of the recessed can or track head affects brightness. Shiny metal and white interiors reflect light. Black absorbs some light, so you might want more lumens to compensate.

**Standouts from our tests:** EcoSmart LED Downlight 10.5W 65W E26 ECO-575L, \$25. It's sold at Home Depot, is dimmable, and instantly brightens. Feit Electric EcoBulb Plus Soft White R30 65W R90s BPESL15BR/2 CLF, \$9. It trades a lower price for a much longer warm-up time. Both replace 65-watt bulbs.

### ▣ Outdoors

The colder the temperature the longer it will take for CFLs to brighten up. LEDs aren't affected by the cold. Bulbs in the 2,700- to 3,000-kelvin range flatter warm-colored exteriors; bulbs with 3,500 or more kelvins enhance grays and cool colors and can appear brighter.



Philips AmbientLED

EcoSmart CFL

**Standouts from our tests:** Utilitech's Soft White Par38 90W Outdoor Flood 075232 60064 CFL, \$13, sold at Lowe's. It replaces a 90-watt bulb and provides ample brightness. Swap your 75-watt bulb for the EcoSmart PAR38 E53 38 Bright White 75W 866194 LED, \$33. The dimmable bulb is sold at Home Depot.





A1 Apple



B3 Asus

# Monitors that pop

It's easy to find a TV with 3D capability, but 3D computer monitors have been rare and expensive. Now, though, things are looking up for gamers and movie buffs who want to add another dimension to their computer setups.

Included in our Ratings are four 3D monitors. **A2 Acer**, \$680, is a 27-inch monitor that has very good display quality and equally fine 3D. **B1 Alienware**, \$450, **B4 Asus**, \$450, and **B7 Planar**, \$370, are 23-inch monitors with very good display quality and great-looking 3D.

All four monitors use active 3D technology, which generally does a much better job maintaining the 3D effect at various viewing angles than displays that use passive 3D technology.

The picture on an active 3D monitor isn't quite as bright in 3D mode as it is on a passive display. You'll need special glasses to view 3D on the monitors in our Ratings. Compared with glasses for passive 3D, active-3D glasses tend to be heavier, cost more, and might need batteries. Glasses are included only with **A2 Acer**.

Another feature you'll be seeing more on monitors is touch-screen technology. **B5 Planar**, \$395, is a touch-screen display that also works with an included stylus. **B10 Acer**, \$330, has a touch screen as well. The touch-screen monitors we tested already work with the touch capabilities built into Windows 7.

What's more important to consider is what's coming with Windows 8, which is being developed with tablets and com-

## Select Ratings Monitors

Best choices from our tests of 26 models.

☒ CR Best Buy  
☒ Recommended

● Excellent ● Very good ○ Good ● Fair ● Poor

Recommendation	Rank	Brand & model	Price	Overall score	Test results				Features				
					Display quality	Ease of use	Versatility	Energy costs/yr.	Display size (in.)	Wide viewing angle	3D-capable	HDMI input	Speakers

### A 27- TO 30-INCH DISPLAY

<input checked="" type="checkbox"/>	1	Apple 27" LED Cinema Display	\$1,000	71	●	●	○	\$20	27	●	●		
<input checked="" type="checkbox"/>	2	Acer HN274H	680	62	●	○	●	12	27	●	●	●	

### B 22- TO 26-INCH DISPLAY

<input checked="" type="checkbox"/>	1	Alienware OptX AW2310	450	68	●	●	●	15	23	●	●		
<input checked="" type="checkbox"/>	2	ViewSonic VG2236wm-LED	220	68	●	●	●	7	21.5				●
<input checked="" type="checkbox"/>	3	Asus ML239H	200	68	●	○	○	11	23	●	●		
<input checked="" type="checkbox"/>	4	Asus VG236H	450	67	●	●	●	15	23		●	●	
<input checked="" type="checkbox"/>	5	Planar PXL2430MW	395	66	●	○	●	7	23.5		●	●	●
<input checked="" type="checkbox"/>	6	Samsung SyncMaster C23A750X	350	65	●	●	●	12	23		●		
<input checked="" type="checkbox"/>	7	Planar SA2311W	370	64	●	○	●	17	23	●	●		
<input checked="" type="checkbox"/>	8	NEC MultiSync E231W	230	63	○	●	●	8	23				
<input checked="" type="checkbox"/>	9	HP 2511x	280	63	●	●	○	11	25		●		
<input checked="" type="checkbox"/>	10	Acer T231H bmid	330	62	●	●	●	13	23		●	●	●
<input checked="" type="checkbox"/>	11	LG IPS236V-PN	250	61	●	○	○	10	23	●	●		
<input checked="" type="checkbox"/>	12	Samsung BX2350	280	61	●	○	●	9	23		●		

### C 20-INCH DISPLAY

<input checked="" type="checkbox"/>	1	HP 2010i	130	59	○	●	○	8	20		●		
<input checked="" type="checkbox"/>	2	Acer S201HL	100	57	○	●	○	5	20				
<input checked="" type="checkbox"/>	3	ViewSonic VG2028wm	180	56	○	○	●	8	20		●		

puters in mind. That new operating system will incorporate a lot of touch-screen features into its new interface, which will include a series of tiles that represent your applications, documents, and so on. Windows 8 is due in the fall of 2012.

Finally, **A1 Apple's** new 27-inch moni-

tor is one of the best displays we've seen. It has high resolution, accurate color, and deep blacks. It also has a wide viewing angle. It's an LCD display with LED backlighting, which makes it thinner than models that use conventional fluorescent backlights.

# The New Rules of Car Buying

Save thousands of dollars on a new car. Negotiating is the secret.

Negotiating for a new car can strike fear into the heart of even the most rugged individuals. It's not surprising. Car dealers and manufacturers have arranged pricing in a manner designed to daze and confuse the consumer.

However, simply by understanding the tricks of the trade, consumers can save hundreds, even thousands of dollars on their new cars.

That's why *Consumer Reports* has created *The New Car Price Service*. This service gives you everything you need to walk into a showroom with confidence – and walk out with a great deal.

The New Car Price Service breaks down the negotiating process into a few simple rules:

## RULE #1: BREAK THE DEALER'S CODE.

When you walk into a car showroom, you'll see two prices:

1. The *Manufacturer's Suggested Retail Price (MSRP)*
2. The *Dealer Invoice Price*. Naturally, most people think it is wise to negotiate down from the *MSRP* to as close to the *Dealer Invoice*

Price as you can get. And that's exactly what the dealer wants you to think – but it won't get you the best deal. The reason:

Both the *MSRP* and the *Dealer Invoice Price* are "artificial" numbers created by the car manufacturer and dealer to serve their negotiating purposes.

Neither price should be used by you as a starting point in your negotiation.

What you need is the real price the dealer paid for the car.

If you know the real price, you'll have true negotiating power because you'll know how much



New-car buyers who use *The New Car Price Service* save an average of \$1,661.

"wiggle" room you really have. You should bargain up from this real price.

Naturally, dealers don't display this real price in the showroom. To obtain the real price for any car you're interested in buying, call *The New Car Price Service* at 1-800-279-5658.

## RULE #2: FIND OUT ABOUT UNADVERTISED DEALER INCENTIVES AND HOLDBACKS.

These are tools the dealer uses to negotiate to his favor. You should know about them so you can use them to negotiate to your favor.

Take "dealer holdbacks," for example. A holdback is a percentage that is repaid to the dealer by the manufacturer. The holdback is designed to supplement the dealer's cash flow (code words for sales commissions) by artificially elevating the dealership's paper cost. If you know the dealer's holdback, you can use that information as a negotiating tool to lower your price. To learn how to use these powerful negotiating tools, call *The New Car Price Service*: 1-800-279-5658.

## RULE #3: PLAY THE GAME.

*The Consumer Reports New Car Price Service* takes you step by step through the negotiating game with professional new-car buying advice. And when it comes to options and safety equipment, you'll know what's really worth your money versus "dealer extras" that do nothing except cost you "extra" money.

For example: The dealership's "business manager" may try to sell you undercoating, rustproofing, fabric protection, extended warranty, windshield etching, etc. But don't bite. Such add-ons are generally worthless or overpriced.

## RULE #4: IF YOU HAVE A TRADE IN.

Don't even mention it until you've agreed on the price of your new car. But when it's time to talk trade-in, you should know what your trade-in is worth whether you sell it privately or to a dealership. You can get that information from us too and it costs just an additional \$12.

## THE NEW CAR PRICE SERVICE

*The New Car Price Service* costs \$14 and can save you thousands of dollars on a new car. The service gives you a complete report on the car you are interested in purchasing. The report is an organized plan and advice on playing the game. While the average savings is \$1,661, the potential savings is far greater, depending on the model of car. For example, the potential savings on the Jeep Liberty is \$4,908. The phone call is free: 1-800-279-5658

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Please have the following ready when you call:

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- ✓ Year, make, model, and trim line of your trade-in, if you have one. (Example: 2004 Honda Odyssey)
- ✓ Your credit card (Visa, MasterCard, Discover or American Express)

Ask about  
our newest feature  
"Build & Buy"

call toll-free  
**1-800-279-5658**

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**SPREADING IT OUT** Tester Nilda Adell puts peanut butter on plates that we clean in our grueling tests.

# Dishwashers

Our picks include premium features for less

**N**EEED A NEW DISHWASHER that won't break the budget? You can pay as little as \$500 to clean your grimmest dishes of baked-on food, and only \$100 more to get a stainless tub plus more flexibility in arranging items. More good news: Some premium features, such as hidden controls and half-load wash cycles, are migrating down to the \$500-to-\$600 range.

All the models we've recommended are energy- and water-efficient, but if you want a model that qualifies for the federal

government's most recent Energy Star standards, it's going to take some extra research. The program will raise the bar for energy and water use starting in January, but it's almost impossible to distinguish new from outdated certifications. You'll find that information in our Select Ratings.

Efficiency, though, doesn't matter if you can't trust what you're buying to last. In our annual reader survey, there was a large spike in repairs of models from Amana and Maytag, two Whirlpool brands. Those repairs were largely due to a recent major

recall involving the electrical failure of heating elements.

Our tests of 56 conventional models and five dishwasher-drawer models use dishes coated with egg yolks, chili, raspberry preserves, peanut butter, and other gooey ingredients to challenge models. We found great performance for a brand we can't recommend, a feature starting to appear on more models, and new dishwasher drawers with sorry results. The details:

**Higher ranking, same reliability.** The previously tested LG Steam LDF7932, \$1,000, is now ranked near the top in our full Ratings, behind only the Bosch SHX98M0[9]UC, \$1,550, in overall performance. But you won't see it or other LG models among our recommended models because LG remains among the least reliable dishwasher brands. Its 21 percent repair rate is roughly double that of many brands.

**Water softeners get a hard sell.** More dishwashers, including the KitchenAid KUDS30SX, \$950, include a water softener to counter spotting on dishes and other effects of hard water. KitchenAid says that some users with slight water-hardness problems might want water softening only for their dishwashers, and claims it can improve washing with phosphate-free detergents. But we've found phosphate-free dishwasher detergents that already offer fine cleaning.

If your water is especially hard, you're probably better off installing a whole-house softening system instead of having it on your dishwasher. That's because water hardness can affect other appliances and showering. At the very least, check

## Don't be Energy Star-struck

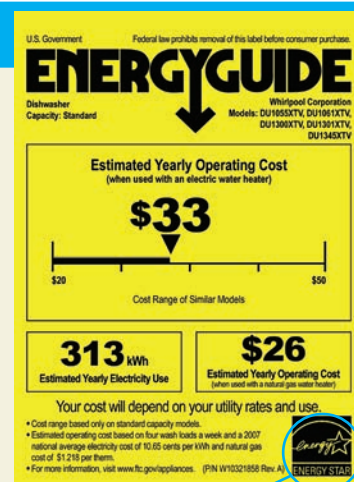
When you see the Energy Star logo on a dishwasher's yellow EnergyGuide tag or anywhere on the machine, you can rest easy knowing that it meets that federal program's latest standards of energy and water efficiency. Right?

After Jan. 20, 2012, you could be wrong. As of that date, models must be about 9 percent more energy efficient (and use almost 27 percent less water) to qualify. But based on the label or the machine's markings, there's no way to know whether the dishwasher you're looking at meets the 2012 criteria or the 2009 requirements.

Manufacturers and retailers can't advertise or otherwise promote as Energy Star models that no longer qualify, but machines already in the stores (or in their

warehouses), don't have to have covered or modified labels if the products no longer qualify. About four to five months before a standards update, any new appliance that undergoes testing should be certified to the new standard. But for dishwashers there's no date accompanying the logo that might designate a model as newly introduced.

The only way to be sure, according to an EPA spokesperson we contacted, is to check the Energy Star website, at [www.energystar.gov](http://www.energystar.gov), for a list of qualified dishwashers. The list will be available Jan. 20. That doesn't help if you're seeking a post-holiday discount or you need precise information to apply for a rebate. In the meantime, use our Ratings, which note machines that meet the 2012 standard.



**FALLING STAR** This model will lose its status, yet the logo stays.

## The Consumer Reports Bottom Line Price



## The bottom line in new car negotiations

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## LAB TESTS

with your water utility before paying the extra \$100 to \$150 for that feature. Some utilities soften the water they supply.

**Drawers still fail to impress.** The latest contenders are from Fisher & Paykel: the 24-inch-wide DD24DCHTX6V2, \$1,350, with two drawers, and the 36-inch, single-drawer DD36SDFTX1, \$1,050. The latter holds only nine place settings and was only fair at washing. Because it's wider than a traditional dishwasher, you'd need to remodel your cabinets to install it. Both models' overall scores were dismal, 41 and 20, respectively. Fisher & Paykel is among the brands most likely to break. Though dishwasher drawers in general are as reliable as conventional dishwashers, drawers tend to use more energy and water.

### How to choose

We aren't seeing longer cycle times so far from models that meet the 2012 Energy Star requirements. But some models already take as long as 3 hours for a full cycle. Check our Ratings for cycle times, and use options sparingly if, for instance, you don't want your cycle continuing through the night. Some shopping tips:

**Weigh the features.** For the most versatility, look for adjustable racks, lots of flatware slots, and if you wash large or odd-shaped items, fold-down tines. Tubs made of stainless steel or grey plastic hide stains better than tubs made of white plastic. Stainless tubs are sometimes available as an option.

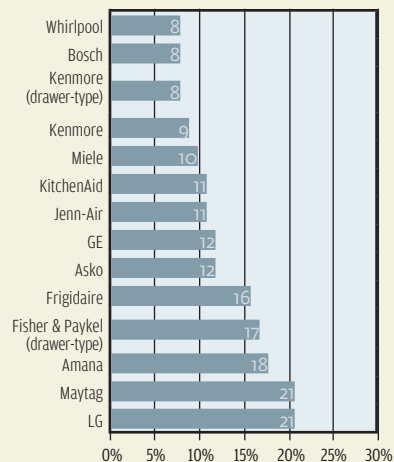
**Match your cleaning habits.** You really don't need to prerinse dishes, and the models we recommend did especially well at leaving no food residue. But if you insist on prerinsing, don't pay extra to get a power-scrubbing mode. Either way, expect to see fewer self-cleaning filters as manufacturers add spray features that can break food into smaller bits that pass through manual filters.

**Consider the controls.** The Kenmore Elite 1404[3] has interactive touch controls. But touchpads are fine if clearly marked. And if you opt for controls you can't see during operation, make sure you can still see the cycle status on the front.

## Most and least reliable

Frigidaire, Fisher & Paykel, Amana, Maytag, and LG were among the most repair-prone brands; Amana's and Maytag's repair records were affected by a major 2010 recall. That's what we found when we asked more than 82,000 readers who bought a dishwasher between 2007 and 2011 about their experiences. The graph shows the percentage of models for each brand that were repaired or had a serious problem. Differences of less than 5 points aren't meaningful, and we've adjusted data to eliminate differences linked solely to age and usage. Models within a brand may vary, and changes in design or manufacture may affect future reliability. Still, choosing a brand with a good repair history can improve your odds of getting a reliable model.

Dishwashers



Source: Annual Product Reliability Survey, Consumer Reports National Research Center.

## Hold the phosphates—and the complaints



Pulling dirty dishes from the dishwasher? Low- and no-phosphate detergents, the only types available since mid-2010, have been getting the blame. But you don't have to wait for the entire class of newly formulated products to improve. Be sure you're loading the dishwasher according to the manufacturer's recommendations. In our most recent tests, **Cascade Complete All in 1 ActionPacs** (shown), 29 cents per load, cleaned very well and didn't leave a white film on dishes or discolor aluminum.





3 Bosch



5 Whirlpool

## Select Ratings Dishwashers

Best choices from our tests of 61 models.

● Excellent ● Very good ○ Good ● Fair ● Poor

Recommendation	Rank	Brand & model	Price	Overall score	Test results			Features						
		Similar models, in small type, are comparable to tested model.		0100 P   F   G   V6   E	Washing	Energy use	Noise	Ease of use	Cycle time (min.)	2012 Energy Star-qualified	Self-cleaning filter	Cycle-time display	Delay start	Stainless-steel tub
✓	1	Bosch SHX98M0[9]UC	\$1,550	81	●	●	●	●	115	●			●	●
✓	2	KitchenAid KUDE50CX[SS] KUDE48FX[ ], KUDE40FX[ ], KUDE20FX[ ], KUDE20IX[ ]	1,350	79	●	●	○	●	125	●			●	●
✓	3	Bosch Evolution 500 SHE55M1[2]UC	850	79	●	●	●	●	110	●		●	●	●
✓	4	Kenmore Pro HE 1317[3]	1,390	79	●	●	●	●	145					●
✓	5	Whirlpool Gold GU2300XTV[Q] GU2275XTV[ ], GU2475XTV[ ]	500	78	●	●	○	●	135		●			
✓	6	Bosch SHX43P1[2]UC SHE43P1[ ]UC, SHV43P1[ ]UC	800	77	●	●	○	●	115	●				●
✓	7	KitchenAid KUDE70FX[SS] KUDE60FX[ ], KUDE60HX[ ]	1,450	76	●	●	○	●	115	●			●	●
✓	8	Whirlpool Gold GU3600XTV[Q]	850	76	●	●	●	●	145					●
✓	9	Bosch SHE6APO[2]UC <b>D</b> <small>SHE5ALO[ ]UC, SHE4APO[ ]UC</small>	600	75	●	●	○	●	135	●		●	●	●
✓	10	KitchenAid KUDS30SX[SS]	950	75	●	●	○	●	115	●	●		●	●
✓	11	Whirlpool DU1055XTV[Q]*	380	75	●	●	○	○	125		●			
✓	12	Whirlpool Gold GU2800XTV[Q]	650	75	●	●	○	○	155					
✓	13	GE Profile PDWT500R[WW] PDWT580R[ ], PDWT502R[ ]	1,200	74	●	●	●	●	110		●	●	●	●
✓	14	Kenmore Elite 1404[3] 1397[ ]	1,800	74	●	●	○	●	135	●		●	●	●
✓	15	Kenmore Elite 1396[2] 1394[ ]	1,000	73	●	●	●	○	135	●			●	●
✓	16	Kenmore Elite 1392[2] 1393[ ]	700	72	●	●	○	○	135	●			●	●
✓	17	Bosch Ascenta SHE6AP1[2]UC	680	72	●	●	●	●	105	●		●	●	●
✓	18	Bosch SHX65P0[5]UC <b>D</b> <small>SHE65P0[ ]UC</small>	1,050	72	●	●	●	●	120	●		●	●	●
✓	19	Bosch Integra 800 Plus SHX58E2[5]UC, SHE8ER5[5]UC, SHX8ER5[5]UC, SHX7ER5[5]UC, SHE7ER5[5]UC, SHV7ER5[3]UC	1,500	72	●	●	○	●	125	●		●	●	●
✓	20	Samsung DMT800RH[W]	750	72	●	●	○	●	120	●	●		●	●

**D** Discontinued, but similar model is available; price is for similar model. \*Lacks an adjustable top rack and tines.

## Guide to the Ratings

**Overall score** is mainly washing performance and includes energy use, noise, cycle time, and ease of use. Displayed scores are rounded; models are listed in order of precise overall score. Note that scores for previously tested models may have changed because of changes in scoring methodology. All test results except for ease of use are based on a normal or equivalent cycle. **Washing** indicates results with very dirty full load. **Energy use** is energy and water use. **Noise** covers listener judgments and sound-level measurements. **Ease of use** includes convenience factors and loading. We measure **cycle time** (rounded to nearest 5 minutes) with a very dirty full load; it includes temperature-boost option and, if available, heated dry. Under **brand & model**, bracketed letters or numbers mean color code. **Price** is approximate retail.

## Overview

These dishwashers offer superb cleaning and are energy efficient. Most also have an adjustable top rack and fold-down tines for better loading flexibility.

### ✓ CR Best Buy

These models offer the most performance for the price. All are recommended.

### ✓ Recommended

These high-performing models are all fine choices and include CR Best Buys.

### If quiet is crucial:

**3** **Bosch** \$850

**4** **Kenmore** \$1,390

**15** **Kenmore** \$1,000

**3** and **15** meet tougher 2012 Energy Star requirements. **3** displays the cycle time and has one of the shortest cycle times of the bunch. **4** takes longer to get your dishes clean but is so quiet you might not even know it's running.

### Budget-friendly performers:

**5** **Whirlpool** \$500 **CR Best Buy**

**11** **Whirlpool** \$380 **CR Best Buy**

Both have self-cleaning filters and wash as well as much more expensive models. But you give up some energy efficiency and quiet for their lower prices.



15 Kenmore

### ▶ CHECK OUT OUR VIDEO

Using your smart phone, download the ShopSavvy or the RedLaser app, then scan the code at right. Or go to [www.ConsumerReports.org/dishwasherbuy](http://www.ConsumerReports.org/dishwasherbuy).



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\*Prices vary by area. Savings off MSRP including incentives is an average based on actual customer transactions as of 6/30/11.  
SERVICE NOT AVAILABLE IN CANADA



## Reports

GPS navigators 49

Owner satisfaction 50

Midsized luxury sedans 52

# Cars

Road tests, auto products, hot topics



## Avoid backups with better traffic info

Until recently the traffic information you got through a GPS navigation system was mainly limited to major routes in metro areas. It often did little for drivers on secondary roads or in less populated areas. But that's changing. New services now provide expanded traffic info on a much wider range of routes, making them more helpful for daily use.

In addition to traditional traffic-info sources, such as road sensors, traffic cams, and helicopters, newer systems use crowd sourcing—the info is gathered from drivers who allow their location to be continuously and anonymously tracked through their cell phone or a “connected” GPS device. That allows you to see where traffic is slowing down or congested in real time, even on many secondary roads.

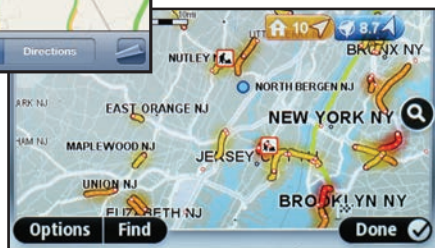
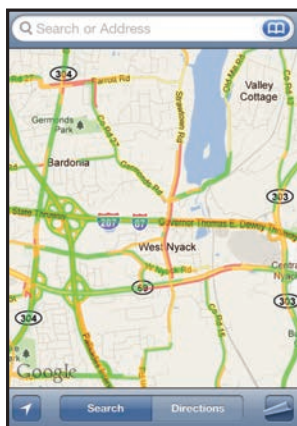
Google Maps, used in Android and Apple smart phones and on the Web, displays traffic-flow info with color-coded green, yellow, and red lines (see above). And anecdotal accounts of staffers using the Google Maps app have found the info fairly accurate, although not perfect.

TomTom claims its new expanded service, HD Traffic, now covers 6 million miles of U.S. roads. The screen shows only areas of congestion, though, so you have to assume

other roads are monitored and flowing freely. HD Traffic is available on selected models as part of a subscription package of connected services. After a one-year free trial, it costs \$60 per year for GPS units or \$20 annually for the iPhone app.

In our initial testing, we've also seen expanded coverage from Garmin's Digital 3D Traffic service, which is available free on the new \$400 Nuvi 3490LMT. But we've also experienced poor signal strength and spotty reception in some areas, which resulted in no traffic information at all.

We'll provide updates in future issues.



**CHECKING TRAFFIC** Google Maps (above left, on an iPhone) shows flow with color-coded lines. TomTom HD Traffic shows only congested areas.

### GPS gift recommendations\*

#### Best overall

**Garmin Nuvi 3490LMT** \$400. Loaded with features and easy to use. Includes voice control, Digital 3D Traffic, and lane assistance.



#### Best on a budget

**Garmin Nuvi 2250** \$120. Good navigation without a lot of bells and whistles.



#### Best for road trips

**Magellan RoadMate 3055** \$170. A handy guide shows restaurants, gas stations, and other services at highway exits.



#### Best for commuters

**TomTom Go 2535 M Live** \$300. New HD Traffic feature provides information on more routes.



#### Best for RVs and pickups

**Magellan RoadMate Pro 9165T** \$400. Provides camping info and will route you on appropriate roads for the vehicle's weight and dimensions.



\*Prices can vary.

# Would you buy it again?

## Owners of sporty cars and gas sippers are the most satisfied

**T**HE CHEVROLET VOLT is a plug-in hybrid that seats only four people, has an advanced but unproven powertrain, and carries a sticker price of about \$40,000. And it's now the top-scoring model in our latest owner-satisfaction survey results. Ninety-three percent of respondents who own the car say they would definitely buy it again. That edged out the V8-powered Dodge Challenger and the Porsche 911, each with owner-satisfaction scores of 91 percent.

Those models reflect a larger trend we've seen in recent years: Sporty cars and fuel-

efficient cars with alternative drivetrains tend to generate more enthusiasm and loyalty than most other types of vehicles. Of the 27 models that got our top owner-satisfaction rating—at least 80 percent of respondents said they'd definitely buy the car again—12 were sporty cars or convertibles and nine were hybrids or diesels.

Our owner-satisfaction scores are based on the results from our latest Annual Auto Survey, which was conducted by the Consumer Reports National Research Center. Scores are based on the percentage of respondents who answered "definitely

yes" to the following question: "Considering all factors (price, reliability, comfort, enjoyment, etc.), would you get this car if you had it to do all over again?" The survey drew responses from more than 314,000 subscribers on 2009 through 2012 model-year vehicles.

### Feeling the love ... or not

Though the Volt's high score reflects the excitement surrounding GM's new electric/gasoline drivetrain, it comes with a caveat. The model had been in showrooms for only a few months when our survey was

## The best and the worst

The charts below show the most and least satisfying cars in different automotive segments. Models are listed by their satisfaction score, which is based on responses from owners of 2009 to 2012 models. Scores are based on three years of survey data, when available; models with fewer than three years' data are indicated with an \*.



Chevrolet Volt

### COUPES & CONVERTIBLES

Make & model	Definitely buy again
Chevrolet Corvette (base)	89%
Mazda MX-5 Miata	85
Audi A5/S5 Coupe (V6/V8)*	82
Mini Cooper Convertible	81
Audi A5 Coupe (2.0T)*	80
Audi A5/S5 Convertible (AWD)*	80
Infiniti G37 Convertible	67
Nissan Altima Coupe	65
Lexus IS C*	65

### SMALL CARS

Make & model	Definitely buy again
Chevrolet Volt (plug-in hybrid)*	93%
Volkswagen Golf TDI (diesel)*	89
Volkswagen Jetta TDI (sedan, diesel)*	79
Mini Cooper hatchback	79
Honda Fit	78
Nissan Versa	52
Toyota Matrix AWD*	43
Chevrolet Aveo*	37

### FAMILY CARS

Make & model	Definitely buy again
Toyota Prius (hybrid)	85%
Ford Fusion Hybrid*	85
Hyundai Sonata (turbo)*	80
Ford Taurus (turbo)*	78
Ford Fusion (V6, FWD)	76
Mazda6 (sedan)	64
Chevrolet Malibu (sedan)	61
Chevrolet Impala (V6)	53

### UPSCALE & LUXURY CARS

Make & model	Definitely buy again
Lincoln MKZ Hybrid*	89%
Lexus CT 200h (hybrid)*	89
Lexus LS	84
Mercedes-Benz S-Class	82
Acura TL	82
BMW 335i (turbo)	66
Lexus GS	66
Lincoln MKS (non-turbo)	66
Jaguar XF	65
Buick Lucerne (V6)	61

### SPORTY CARS

Make & model	Definitely buy again
Dodge Challenger (V8)*	91%
Porsche 911*	91
Ford Mustang GT	87
Audi S4 (supercharged)*	87
Chevrolet Camaro (V8)	86
BMW 128i	69
Honda CR-Z (hybrid)*	68
Kia Forte Koup*	65



Dodge Challenger



Ford Fusion Hybrid



conducted, and the rating is based on a relatively small sample of owners. Early adopters of a new technology tend to be among the most enthusiastic buyers. We've also found that many newly introduced models get higher owner-satisfaction scores in their first year than in their second and third years. For example, the Smart ForTwo scored a high 84 in 2008, but by 2010 it had dropped to a mediocre 67. Next year, we'll see whether the Volt has been able to maintain its owners' loyalty.

Other fuel-efficient models that earned our top rating include a number of hybrids, such as the Ford Fusion Hybrid, Lincoln MKZ Hybrid, Lexus CT 200h and RX 450h, and Toyota Prius, as well as diesel versions of the BMW X5 xDrive and Volkswagen Golf and Jetta SportWagen.

Sporty models that did well include the supercharged Audi S4, Audi A5 and S5,



**DIESEL POWER** Several models, including the Volkswagen Golf TDI, scored higher in satisfaction than gas counterparts.

Chevrolet Camaro and Corvette, Ford Mustang GT, Mazda MX-5 Miata, and Mini Cooper Convertible. The appeal of power also extends into mainstream models, as owners of turbocharged versions are often more satisfied than owners of conventional versions of the same car. Although the Ford Flex and Hyundai Sonata, for example, are generally well liked by owners,

only their turbocharged versions earned our top rating.

Other vehicle types that received relatively high satisfaction scores are family cars, higher-end sedans and SUVs, and full-sized pickup trucks.

Small cars, lower-priced small and mid-sized SUVs, minivans, and compact pickup trucks tended to score much lower as a group. This year, only three models received our lowest rating, which means that fewer than half of the respondents said they would definitely buy the car again. They are the Chevrolet Aveo, all-wheel-drive Toyota Matrix, and Chevrolet Colorado pickup.

Brand nationality doesn't seem to be a factor among the top-rated models. The 27 models with the highest rating include 10 American, 10 European, and seven Asian models. Audi, Chevrolet, and Ford tied with four models each on the top list.

#### SMALL SUVs

Make & model	Definitely buy again
Ford Escape Hybrid	75%
Subaru Forester	75
Honda CR-V	72
Toyota RAV4 (V6, AWD)	71
Volkswagen Tiguan	70
Kia Sportage (non-turbo)	70
Ford Escape (4-cyl., AWD)	56
Nissan Rogue	56
Jeep Liberty (V6, AWD)	53

#### MIDSIZE SUVs

Make & model	Definitely buy again
Jeep Grand Cherokee (V6)*	77%
Toyota FJ Cruiser (4WD)	75
Toyota Highlander Hybrid	74
Toyota Highlander (FWD)	74
Kia Sorento (FWD)*	74
GMC Terrain (4-cyl., AWD)*	57
Dodge Journey (V6, FWD)	54
Dodge Journey (V6, AWD)	50

#### LARGE & LUXURY SUVs

Make & model	Definitely buy again
Ford Flex (EcoBoost)*	86%
BMW X5 xDrive35d (diesel)*	81
Lexus RX 450h (hybrid)*	80
Lexus LX	79
Ford Expedition (RWD)	78
Mercedes-Benz M-Class (V6)	63
Volvo XC90 (AWD)	63
GMC Acadia	62



Ford Flex

#### WAGONS & MINIVANS

Make & model	Definitely buy again
Volkswagen Jetta SportWagen TDI (diesel)	81%
Subaru Outback	78
Honda Odyssey	76
Audi A4 Avant (AWD)	73
Audi A6 Avant (supercharged)	73
Volkswagen Jetta SportWagen (5-cyl.)	61
Dodge Grand Caravan	56
Kia Sedona	56

#### PICKUP TRUCKS

Make & model	Definitely buy again
Ford F-150 (EcoBoost V6, 4WD)*	84%
Ford F-150 (V8)	78
Chevrolet Avalanche	77
Honda Ridgeline	76
Toyota Tundra (V8)	74
Chevrolet Silverado (V6, RWD)	52
GMC Sierra (V6, RWD)	52
Chevrolet Colorado	47

\*Score is based on one or two years of data.





# Midsized luxury sedans

## Fuel economy goes upscale

**F**UEL ECONOMY has not usually been a high priority for luxury-car buyers. For paying a premium price, they expect strong performance, a long list of amenities, and a quiet, comfortable cabin. And if that rings up a little higher toll at the gas pump, well, that's just the cost of entry. But erratic gas prices and higher federal fuel-economy standards on the horizon are increasingly making automakers look for ways to improve gas mileage even in this category.

The four cars we tested for this issue—the Audi A6, Infiniti M35h, Mercedes-Benz E350 BlueTec, and Saab 9-5—approach

the goal in different ways. Those include hybrid and diesel drivetrains, lightweight materials, seven- or eight-speed automatic transmissions, and supercharging and turbocharging, which lets a car squeeze more power from a smaller engine. The result: Gas mileage for the group is among the best in the category, although the cars' overall performance varies dramatically, from the top-rated Audi to the bottom-rated Saab.

### A new top contender

Redesigned for 2012, the A6 is significantly improved and now ties the Infiniti M37 for the top spot in this class. Its overall road-test score has jumped to 93 from its previous 79, thanks to an inviting combination of strong acceleration, agile handling, a comfortable ride, and a quiet, well-finished interior. Moreover, the A6's supercharged V6, new eight-speed automatic transmission, and slightly lighter weight help boost its fuel economy to 22 mpg overall, even with all-wheel drive.

The fuel-economy champ in this class is now the E350 BlueTec, which is powered by a 3.0-liter V6 diesel engine. Its 26 mpg overall edges out the M35h's 25 mpg and is much better than any luxury sedan with a conventional gasoline engine. The trade-off is some engine noise at low speeds. Our tested car, equipped with Mercedes' Luxury package, is a comfortable, quiet, agile, and luxurious sedan that ranks just below the leaders in this category.

The M35h is Infiniti's first hybrid, and it shows teething pains. The gas-electric system helps deliver quick acceleration and fuel economy that's on par with some four-cylinder family sedans, but its power delivery tends to be jerky and abrupt. In addition, the M35h's handling and braking are not quite up to that of the conventional M37. All of that detracts from an otherwise outstanding package.

The redesigned Saab 9-5 is disappointing in this class. It shares a platform with the Buick LaCrosse and Regal, its former GM cousins, but the 9-5 doesn't measure

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**VARIETY** (From left) The Infiniti M35h, Mercedes-Benz E350 BlueTec, and Audi A6 achieve efficiency using diverse methods.



## Overview

Midsized luxury sedans offer a pleasurable, quiet atmosphere, many passenger and driver amenities, and ample seating room for five adults. Most deliver strong performance, sporty handling, and a comfortable ride. All-wheel drive is also offered on many models in this category.

### ✓ Recommended

These vehicles scored well in our testing, had average or better reliability in our subscriber survey, and performed at least adequately if included in government or insurance-industry safety tests.

### For agile handling:

**A2** Infiniti M37

**A5** Cadillac CTS

### For a quiet cabin:

**A9** Mercedes-Benz E350

### For a bargain price:

**A4** Hyundai Genesis

### Why some vehicles are not recommended

The Audi A6, Mercedes-Benz E350 BlueTec, and Infiniti M35h are too new for us to have compiled reliability data for them. We do not have sufficient reliability data for the Acura RL and Lincoln MKS (EcoBoost). The BMW 535i and Jaguar XF have subpar reliability. The 9-5 scores too low in our tests, and we do not have sufficient reliability data for it.

up well to those models or its competitors. The turbocharged four-cylinder engine in our test car—the most frequently chosen engine—returns 22 mpg, the same as the A6. And although the 9-5 has excellent fit and finish and secure handling, it has a noisy engine, stiff ride, impaired visibility, and relatively slow acceleration.

Prices for this group range from the 9-5's \$46,655 to the M35h's \$58,655. None of these cars is recommended. The 9-5 didn't score high enough, and the others are too new for us to have reliability data.

## Auto Test Extra: Mini Cooper Countryman S

This four-door crossover-type SUV is larger and taller than the familiar Mini Cooper, yet it still has the agility and frisky character of its siblings. It also achieved an excellent 26 mpg overall, which is better than any nonhybrid small SUV we've tested. But a stiff ride, a noisy cabin, and confusing controls limited its overall road-test score to 66. See page 59 for the report.

# Ratings Luxury sedans

● Excellent  
● Very good  
○ Good  
● Fair  
● Poor

	Make & model	Price as tested	In this issue	Overall road-test score	Predicted reliability	Overall mpg
Recommendation	Rank			0 100 P   F   G   VG   E		

## A LUXURY SEDANS

1	Audi A6 3.0T Premium Quattro	\$56,295	●	93	new	22
✓ 2	Infiniti M37	53,825		93	○	21
3	Mercedes-Benz E350 BlueTec	57,525	●	89	NA	26
✓ 4	Hyundai Genesis 4.6*	43,800		87	○	20
✓ 5	Cadillac CTS Premium (3.6)	50,995		84	○	19
6	Infiniti M35h	58,655	●	83	new	25
7	BMW 535i	58,375		81	●	23
8	Acura RL*	50,660		80	NA	19
✓ 9	Mercedes-Benz E350*	55,245		79	○	19
10	Lincoln MKS (EcoBoost, AWD)	52,770		75	NA	18
11	Jaguar XF (base)*	54,075		72	●	20
12	Saab 9-5 Turbo4 Premium	46,655	●	69	NA	22

## B SMALL SUVs

✓ 1	Subaru Forester 2.5XT Limited	\$28,860		87	●	20
✓ 2	Toyota RAV4 Limited (V6)	30,328		83	●	22
✓ 3	Volkswagen Tiguan SEL	35,479		80	○	20
✓ 4	Mini Cooper Countryman S	32,500	●	66	○	26
5	Mitsubishi Outlander Sport SE	23,995		65	NA	23
✓ 6	Nissan Juke SV	23,300		65	○	24

\*Powertrain changed since last test.



THE A6 LINE **Body style** Sedan **Drive wheels** Front or AWD **Trim lines** Premium, Premium Plus, Prestige **Engines & transmissions** 2.0-liter turbocharged 4 (211 hp), 3.0-liter supercharged V6 (310 hp); CVT, 8-speed automatic **Base price range** \$41,700–\$56,780

# Audi A6

The redesigned Audi A6 is an impressive car and a joy to drive. It succeeds in many areas: It is agile, comfortable, quiet, and quick. It also rides smoothly, has a sumptuous and accommodating interior, and returns commendable fuel economy, even with all-wheel drive. And the A6 provides an impressive variety of high-tech features, although its controls are complicated and can be distracting.

## Ride, handling, and drivetrain

The A6 has a very comfortable ride and doesn't feel overly firm at low speeds, unlike some other Audis. The cabin is exceptionally quiet overall, with only traces of road noise coming in.

Handling is nimble, and the quick steering gives good feedback. The Audi-Direct system lets drivers select steering-effort and engine-response settings. But at 41 feet, the turning circle is wide.

At our track, the A6 gripped the road firmly and understeered gently once pushed past its handling limits. In our avoidance maneuver, it exhibited the onset of oversteer at high speeds until the stability-control system intervened.

The supercharged 310-hp, 3.0-liter V6 engine is buttery smooth and delivers excellent acceleration. It returns a very good 22 mpg but requires premium fuel. The smooth and responsive eight-speed

automatic transmission maximizes performance and fuel economy, and its gear steps are so narrow that the shifts are almost imperceptible.

## Inside the cabin

The interior is finely finished, with high-quality materials. But the stiff rear-center armrest creaked when pulled down.

There's good head and leg room in the comfortable cabin, and the A6 has a tilt-and-telescoping steering wheel. But the console intrudes a bit into right leg room, and at this price, power steering-wheel adjustments should be standard. Seating is very comfortable, with supportive front seats. The rear area is fine for two, but leg and head room in the center are limited.

Controls can be complicated. Many buttons, including the multifunction control-

## Tested vehicle



**▲ Highs** Powertrain, handling, ride, quietness, fuel economy, front-seat comfort, fit and finish, high-tech features

**▼ Lows** Controls, turning circle

**Trim line** 3.0T Quattro Premium Plus

**Drivetrain** 310-hp, 3.0-liter supercharged V6; eight-speed automatic transmission; AWD

## Major options

Navigation system, 18-inch wheels, xenon headlights, parking sensors, telematics, blind-spot warning, heated steering wheel and rear seats

**Tested price** \$56,295



Scan for video.

ler, are between the seats, and you have to look away from the road to see them. Menus on the clear screen are well organized, but it often takes several steps to get to the function you want. A touchpad can handle audio presets and navigation functions when you trace out letters by fingertip, but it is easily activated by accident. The A6 can provide a Wi-Fi hub and has Web-based information on gas prices, traffic, news, and weather, as well navigation searches. You can also see images via Google Earth. Although viewing some content is locked out when driving, some of the content that is available can be distracting.

The A6 has a long trunk but a small opening. It holds three large suitcases and one duffel bag. Rear seats fold down for more storage, and the center armrest accommodates a bag to hold skis.

## MORE TEST FINDINGS



**ALLURING ATLAS** The Google Earth imagery can be a fascinating distraction.

**Braking** Short stops in wet and dry conditions.

**Headlights** The bright xenon low beams did not reach far, but high beams throw bright light far down the road.

**Access** Hampered by stiff front door checks and high rear sills.

**Visibility** Helped by thin pillars and decent glass area.

**Cabin storage** Modest.

**Head restraints** The center-rear restraint is too low for an adult, even when fully raised.

**Driving with kids** Rear-facing seats might be difficult to secure with belts. Some forward-facing seats might require removing the rear head restraints to get a secure fit. There are three top-tether anchors.





THE E-CLASS LINE **Body styles** Convertible, coupe, sedan, wagon **Drive wheels** Rear or AWD **Trim lines** E350, E350 BlueTec, E550, E63 AMG **Engines & transmission** 3.0-liter turbodiesel V6 (210 hp), 3.5-liter V6 (302 hp), 4.6-liter twin-turbo V8 (402 hp), 5.5-liter twin-turbo V8 (518 hp); 7-speed automatic **Base price range** \$49,800-\$91,500

# Mercedes-Benz E350 BlueTec

The E350 is a quiet and luxurious sedan with a very well-finished interior, comfortable seats, and a substantial feel. The diesel-powered BlueTec model delivers very good fuel economy and packs a powerful midrange punch, but at a cost of some extra noise at low speeds. We bought our car with the Luxury package, which provides a supercomfortable ride. But some controls are complicated.

## Ride, handling, and drivetrain

Quiet and steady on the highway, the E350 has suspension that isolates the cabin extremely well. The Luxury version we tested has a much more compliant ride than the E350 with the Sport package, which rides on low-profile tires.

The E350 is agile for its size, and we found the Luxury version to be quite capable in corners, providing better steering feedback than with the previously tested Sport package. At the track, it posted a high speed through our avoidance maneuver.

The 210-hp, 3.0-liter turbodiesel V6 engine is not quite as powerful as the gasoline V6, but it provides abundant torque and returns 26 mpg in mixed driving (compared with 19 mpg overall from the gasoline engine on premium fuel). Diesel emissions fluid needs to be periodically refilled. The seven-speed automatic transmission shifts smoothly overall, except

for the occasional bumpy shift. The short, column-mounted shifter is not intuitive; a button on its end engages Park when pushed, but we found that it doesn't always happen immediately.

## Inside the cabin

The cabin is very well finished, with many soft-touch surfaces and precise panel fits. Storage areas are nicely lined. The seats are covered in nicely done imitation leather.

Drivers will find plenty of room overall, and a power tilt-and-telescopic steering wheel helps them find a comfortable position. The back-up camera shares its screen with the radio, which inexplicably switches on when reverse is engaged.

Front seats are large, well shaped, and supportive. A full range of power adjustments includes lumbar support. The rear

## Tested vehicle



**Highs** Ride, midrange power, cabin quietness, front-seat comfort, fit and finish, fuel economy with the BlueTec diesel engine

**Lows** Controls

**Trim line** —

**Drivetrain** 210-hp, 3.0-liter turbodiesel V6; seven-speed automatic transmission; rear-wheel drive

## Major options

Folding rear seats, navigation, stereo upgrade, rear-view camera, 17-inch wheels, run-flat tires, comfort suspension

**Tested price** \$57,525



Scan for video.

seat has ample room for two, but the center cushion is too low and the center tunnel robs foot room.

Instruments are straightforward, but the steering wheel blocks the view of some gauges. The E350 uses a complicated multifunction controller, but its controls are simpler overall than those on competing Audi and BMW models. The navigation system operates through the controller or voice commands. Radio and climate systems are mostly operated through simple hard keys. The cruise-control stalk can be mistaken for the directional signal mounted next to it, resulting in cruise-control activation when the driver attempts to signal a turn.

Trunk space is adequate and can be expanded with an optional 60/40 folding rear seatback.

## MORE TEST FINDINGS



**PLUSH** The E350's Luxury package delivers an impressively cushy ride.

**Braking** Short stopping distances overall.

**Headlights** Low beams do not provide sufficient illumination; high beams are much better.

**Access** Hampered by low seats and deep, wide sills in front and high sills in the rear.

**Visibility** Very good to the front and sides, but a high deck and

head restraints mar the rear view. Restraints can be folded by pushing a dash-mounted button.

**Cabin storage** Moderate.

**Head restraints** The rear-center restraint must be raised to protect taller passengers.

**Child seats** It might be difficult to secure infant seats in the rear-center position.



THE M LINE **Body style** Sedan **Drive wheels** Rear or AWD **Trim lines** M37, M37 X, M35h, M56, M56 X **Engines & transmission** 3.7-liter V6 (330 hp), 3.5-liter V6 hybrid (360 hp), 5.6-liter V8 (420 hp); 7-speed automatic **Base price range** \$47,700–\$61,600

# Infiniti M35h

The fuel economy of this hybrid sedan is much better than the conventional M37 and is even on par with some smaller cars. With more power, the M35h is also quicker than the conventional V6 version. But the hybrid system tends to be jerky and abrupt, detracting from an otherwise commendable driving experience, and the car doesn't quite measure up to the M37 in handling and braking.

## Ride, handling, and drivetrain

The M has a firm yet supple ride that keeps body motions under control. Bumps are well muted. It's quiet inside, especially when the car is in electric mode, but the engine is oddly loud when it idles.

Overall, the M35h handles similarly to the conventional M and is nimble. But the added weight of the hybrid battery in the back causes the rear to slide out noticeably, and electronic stability control is slow to intervene. The M35h was slower through our avoidance maneuver than the nonhybrid version.

The M maximizes how long the engine is shut off and can even coast at highway speeds with the engine shut off. But there are rough transitions and hesitations when going in and out of electric mode. At 25 mpg overall, the M35h delivers a 4-mpg improvement over the gas-powered M. Both require premium fuel. Acceleration

is like a light switch; the M is sluggish when operating solely on battery power but then shoots off when the gas engine kicks in. The seven-speed automatic transmission shifts smoothly.

## Inside the cabin

Rich-looking, thickly padded surfaces and detailed stitching on the perforated-leather seats give the interior an opulent look.

A low roofline and large console make the cabin feel snug, but most drivers had plenty of room overall, and a powered tilt- and-telescopic steering wheel helped them find a comfortable position.

The large front seats are well shaped and supportive, with a wide range of power adjustments. But seat controls are difficult to access, and some drivers said the seatbacks were too short to provide proper

## Tested vehicle



**Highs**  
Acceleration, fuel economy, fit and finish

**Lows** Abrupt transitions in and out of electric mode, touchy brakes, trunk

**Major options**  
Navigation system, Bose audio system, cooled front seats, heated steering wheel

**Tested price** \$58,655

**Trim line** –

**Drivetrain** 360-hp 3.5-liter V6 engine and electric motor; seven-speed automatic transmission; rear-wheel drive



Scan for video.

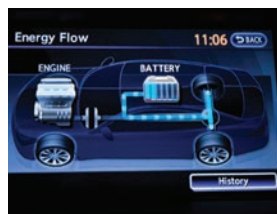
shoulder support. The rear seats two adults comfortably, but the large floor hump occupies leg room for a center passenger.

The dashboard can be a bit daunting, but at least there are direct hard keys and multiple inputs for most functions; you can control them through the touch screen, with the multifunction controller, or by voice. The screen has large, legible text. Gauges are large and brightly lighted, but reflections and the steering-wheel rim can interfere with their view.

Some safety systems, such as blind-spot monitoring, are useful. Others, such as the lane-departure warning, were overly sensitive.

The battery robs a lot of trunk space, and there is no rear-seat pass-through. The compromised trunk holds only two upright suitcases and a duffel bag.

## MORE TEST FINDINGS



**NO FLOW** Changes from gas to electric mode can be abrupt.

**Braking** Regenerative braking makes the pedal feel grabby and difficult to modulate.

**Headlights** Low beams don't project far enough forward and have a sharp cutoff.

**Access** Easy overall.

**Visibility** Good, but a high deck and head restraints obscure the rear view. A rear-view camera

and large side mirrors help.

**Cabin storage** Modest.

**Head restraints** The rear-center restraint is too low to offer protection even when raised.

**Child seats** Some child safety seats might be difficult to fit with belts. LATCH should prove secure, but lower anchor access could be awkward.





THE 9-5 LINE **Body style** Sedan **Drive wheels** Front or AWD **Trim lines** Turbo4, Turbo4 Premium, Turbo6, Aero **Engines & transmissions** 2.0-liter turbo 4 (220 hp), 2.8-liter turbo V6 (300 hp); 6-speed manual, 6-speed automatic **Base price range** \$38,525-\$49,565

# Saab 9-5

Saab's redesigned 9-5 provides excellent fit and finish, fairly nimble handling, and a large trunk. But the good news ends there. The turbocharged four-cylinder engine is wheezy and weak, and it doesn't offer a notable advantage in fuel economy over more powerful engines. Moreover, the 9-5's ride is stiff, the cockpit is narrow, controls are cluttered, and visibility is limited. We see the 9-5 as a poor value.

## Ride, handling, and drivetrain

Bumps punch into the cabin with little isolation. The ride feels jittery even on the highway. Plenty of unwelcome road noise and growling from the engine intrude on the serenity expected of a luxury car.

Routine handling is nimble, and the body leans little in corners. The steering is responsive and has decent feedback, but it requires needlessly high effort when parking. The 9-5 handled well in corners at our track but didn't feel sporty. It posted a decent speed through our avoidance maneuver, but persistent understeer eroded driver confidence.

Most 9-5's have the standard 220-hp, 2.0-liter turbocharged four-cylinder engine; it delivers OK performance but lacks the refinement of many V6s. In mixed driving, it returned 22 mpg on premium gasoline, about what you'd expect from a V6. The six-speed automatic transmission

shifts very smoothly and responsively. The shifter's manual-override feature is convenient. A manual transmission is a no-cost option. The uplevel Turbo6 and Aero trim lines bring a 300-hp turbocharged V6 engine and all-wheel drive.

## Inside the cabin

The 9-5's interior is nicely finished. The dashboard and upper door panels are well padded, and plenty of wood trim imparts a high-quality ambience.

Some drivers complained that the cockpit felt crowded by side windows that curve in, a windshield header that obscures sight lines, and a kick panel and wide console that intrude into front leg room. Seat travel is generous, but tall people might find barely enough head room beneath the sunroof.

## Tested vehicle



**Highs** Fit and finish, trunk, transmission

**Lows** Controls, noise, visibility, ride, no back-up camera, engine refinement, driving position

**Trim line** Turbo4 Premium

**Drivetrain** 220-hp, 2.0-liter turbocharged 4-cylinder engine;

six-speed automatic transmission; front-wheel drive

**Major options** Navigation system

**Tested price** \$46,655



Scan for video.

Front seats provide good lateral and lower-back support, but shorter drivers might find the cushion too long. The rear seating area provides plenty of width and leg room for three adults, but thigh support could be better.

The 9-5's controls could be better arranged. Radio and climate controls are jumbled together, and the power lock switch is in a corner of the center dashboard. Following Saab tradition, the ignition switch is located between the seats, which takes getting used to. In the typical ignition location is a "night panel" button, which turns off lighting to most gauges and switches to help night vision.

The split rear seat folds to expand the already spacious trunk. But our car did not come with a spare tire; you get just an inflator with a tire-sealant kit.

## MORE TEST FINDINGS



**BAD SPOT** The "night panel" button is where you would expect the ignition button.

**Braking** Short and straight stops overall.

**Headlights** Low and high beams shine a good distance, but low beams have a spotty pattern and a sharp cutoff.

**Access** Easy to the front; a high door sill makes the rear harder.

**Visibility** Thick pillars and small windows impede the view, and

no back-up camera is available.

**Cabin storage** Modest, but with an air-conditioned glove box.

**Head restraints** No restraint in the second-row center seat.

**Child seats** Rear-facing infant bases might be difficult to secure in the outboard seats using safety belts. LATCH anchors can be difficult to access.

# Compare

 Recommended


VERSION	Audi A6	Mercedes-Benz E350	Infiniti M	Saab 9-5	Mini Cooper Countryman
<b>TRIM LINE</b>	Premium Plus	BlueTec	M35h	Turbo4 Premium	S ALL4
<b>PRICE: BASE/TESTED</b> <sup>①</sup>	\$49,900/\$56,295	\$50,900/\$57,525	\$53,700/\$58,655	\$43,435/\$46,655	\$26,950/\$32,500
<b>DRIVETRAIN</b>					
Engine	3.0-liter V6 (310 hp) supercharged	3.0-liter V6 (210 hp) turbodiesel	3.5-liter V6 (360 hp) hybrid	2.0-liter 4-cyl. (220 hp) turbo	1.6-liter 4-cyl. (184 hp) turbo
Transmission	8-speed automatic	7-speed automatic	7-speed automatic	6-speed automatic	6-speed automatic
Drive wheels	AWD	Rear	Rear	Front	AWD
<b>TIRES TESTED</b>	Continental ContiProContact, size 245/45R18 100H	Bridgestone Turanza EL400 02 RunFlat, size 245/45R17 95H	Michelin Primacy MXM4, size P245/50R18 99V	Continental ContiProContact, size 245/45R18 100H	Pirelli Cinturato P7 Run Flat, size 205/55R17 91H
<b>RATINGS</b>					
<b>PERFORMANCE</b>					
Acceleration	●	●	●	●	●
0 to 60 mph, sec.	5.7	7.9	5.6	8.4	8.3
45 to 65 mph, sec.	3.9	4.9	4.5	4.9	5.1
Quarter-mile, sec.	14.2	16.2	14.2	16.5	16.5
Transmission	●	●	○	●	●
Routine handling	●	●	●	●	●
Emergency handling	○	●	○	●	●
Avoid. maneuver, max. spd., mph	52.5	53.0	52.0	52.5	54.5
Braking	●	●	●	●	●
From 60 mph, dry/wet, ft.	132/138	132/146	131/144	136/143	135/142
Headlights	●	●	●	○	○
<b>COMFORT AND CONVENIENCE</b>					
Ride	●	●	●	○	○
Noise	●	●	●	○	○
Driving position	●	●	●	○	●
Front-seat comfort	●	●	●	●	●
Rear-seat comfort	●	●	●	○	○
Access	●	●	●	●	●
Controls and displays	○	○	●	○	●
Interior fit and finish	●	●	●	●	○
Trunk/cargo area	○	○	●	○	●
<b>PREDICTED RELIABILITY</b>	new	NA	new	NA	○
<b>FUEL</b>					
Overall mpg	22	26	25	22	26
City/highway mpg	15/34	17/39	17/33	14/34	19/33
Type	premium	diesel	premium	premium	premium
Capacity, gal./Cruising range, mi.	19.8/510	21.1/635	17.9/535	18.5/495	12.4/355
Annual cost, 12K mi. at \$3.80/gal.	\$2,040	\$1,830 @ \$3.90/gal	\$1,835	\$2,030	\$1,735
<b>SAFETY</b>					
<b>CRASH TESTS</b>					
IIHS frontal offset	Good	Good	Good	Good	Good
IIHS side	Good	Good	Good	Good	Good
IIHS rear	Good	Good	Good	Good	Good
IIHS roof strength	Good	Good	Good	Good	Good
NHTSA front, driver/pass.	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
NHTSA side, driver/rear	NA/NA	NA/NA	●/●	NA/NA	NA/NA
NHTSA rollover 2WD/4WD	NA/NA	●/NA	●/●	NA/NA	NA/NA
<b>AIR BAGS</b>					
Side, front/rear	std./opt.	std./opt.	std./no	std./std.	std./no
Head protection	standard	std. w/rollover	standard	standard	standard
<b>ACTIVE SAFETY</b>					
Antilock brakes	standard	standard	standard	standard	standard
Traction control	standard	standard	standard	standard	standard
Stability control	standard	standard	standard	standard	standard
<b>SPECIFICATIONS</b>					
<b>DIMENSIONS AND WEIGHT</b>					
Length/width/height, in.	194/74/58	192/72/58	195/73/59	197/73/58	162/70/62
Wheelbase, in.	115	113	114	112	102
Turning circle, ft.	41	37	39	39	38
Ground clearance, in.	4.5	5.0	5.0	5.0	5.5
Curb weight, lb. (% front/rear)	4,075 (55/45)	4,215 (53/47)	4,135 (51/49)	3,690 (57/43)	3,305 (58/42)
Maximum load, lb.	1,100	895	860	990	860
Luggage, suitcases+duffels	3+1	3+1	2+1	4+0	19.5 cu. ft. (cargo volume)
Towing capacity, lb.	NR	NR	NR	3,965	NR
<b>INTERIOR ROOM</b>					
Front shoulder room, in.	56.0	56.0	57.0	56.5	52.5
Front leg room, in.	44.0	44.0	41.5	43.5	42.0
Front head room, in. <sup>②</sup>	4.0	3.0	4.0	4.0	4.5
Rear shoulder room, in.	53.0	56.0	54.0	55.0	50.0
Rear leg room, in.	29.0	28.5	29.5	31.0	28.5
Rear head room, in. <sup>②</sup>	3.0	3.0	3.0	2.0	3.0

<sup>①</sup> Based on sticker price at time of purchase. <sup>②</sup> Above a person 5'9" tall.



# Mini Cooper Countryman

 Recommended

The Countryman is a small SUV that retains the Mini line's sporty looks, agility, very good fuel economy, and fun-to-drive feel. Unlike other Minis, it has four doors and comfortable seating for four. But controls are frustrating to use, and the ride is choppy. All-wheel drive is available only on turbocharged S models. Common options can make the car pricey, especially compared with other small SUVs.

## Ride, handling, and drivetrain

Quick steering, fantastic agility, minimal body lean, and strong tire grip all make the Countryman a blast to throw into corners. When pushed on our test track, it posted an impressive 54.5 mph while threading through our avoidance maneuver.

A trade-off for the sporty character is a stiff ride that is jittery even on the highway. Road and wind noise permeate the cabin.

The 184-hp, 1.6-liter turbocharged four-cylinder engine delivers very good acceleration and a sporty exhaust note. Fuel economy is a respectable 26 mpg overall, even with all-wheel-drive, but the car requires premium fuel. The six-speed automatic transmission delivers quick, responsive shifts. The AWD system works well in snow and slush, but this SUV is no off-roader.

## Inside the cabin

Lots of interior detailing and textured plastic surfaces (some with wide gaps and sharp edges) form a whimsical interior environment.

The driver's area is spacious, and the tilt-and-telescopic steering wheel helps most find a comfortable position. But the nonadjustable shoulder belt can rub against your neck. There's no center armrest.


The seats are nicely bolstered, but some people found them too narrow and wanted more lumbar support. The two rear bucket seats slide and recline; leg room is adequate. A three-passenger bench is a no-cost option.


Simplicity often takes a backseat to style. Switches are often difficult to decipher. Climate controls are low, and the tachometer is partially blocked by the steering wheel.

The Countryman's giant speedometer is in the middle of the dashboard and not easy to read at glance. But there's a small digital speedometer in the tachometer behind the steering wheel. Only one suitcase fits in back with the seats up, but folding the seats creates more room.



## Tested vehicle

 **Highs** Handling, acceleration, transmission, fuel economy

 **Lows** Ride, noise, controls, cargo space, premium fuel, flimsy interior details

**Trim line** S ALL4

**Drivetrain** 184-hp, 1.6-liter turbocharged

four-cylinder engine; six-speed automatic transmission; all-wheel drive

**Major options** Heated seats, sunroof, automatic climate control, xenon headlights, Bluetooth, iPod adapter

**Tested price** \$32,500



**RAIL THIN** Detachable holders for glasses and phones can get in the way, sometimes snap off their mounting track, and are flimsy.

**THE COOPER COUNTRYMAN LINE** **Body style** 4-door SUV **Drive wheels** Front or AWD **Trim lines** Base, S **Engines & transmissions** 1.6-liter 4 (121 hp), 1.6-liter turbo 4 (184 hp); 6-speed manual, 6-speed automatic **Base price range** \$21,750–\$27,050

## MORE TEST FINDINGS

**Braking** Very good with an easy-to-modulate brake pedal.

**Headlights** Low-beam xenons reach far and send plenty of light to the sides but have a sharp cutoff. High beams reach farther.

**Access** Narrow pathways to the front and rear.

**Visibility** The low windshield header makes it

difficult to see traffic lights overhead, and the big rear head restraints block much of the rear view.

**Cabin storage** The storage rail system is unimpressive and a constant source of rattles. Other storage is minimal.

**Child seats** Should be secure in either rear seat, but a front seat might need to be pulled forward to make room.

## ▶ CHECK OUT OUR VIDEO

Download the ShopSavvy or the RedLaser app, then scan the code at right with your smart phone. Or go to [www.ConsumerReports.org/countrymantest](http://www.ConsumerReports.org/countrymantest).



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Neal Myerberg, one of America's foremost authorities on tax- and financial-planning strategies using charitable techniques, will present "Protecting Yourself in a Difficult Economy: Securing Adequate Income When Interest Rates Are Low." A senior CR engineer will follow with "Labs on Tour," a look at

Consumer Reports' testing program. Presentations are tentatively scheduled for Jan. 31, 2012, in St. Petersburg/Sarasota, Fla.; Feb. 1 in Fort Myers, Fla.; and Feb. 2 in Boca Raton, Fla. For information and to reserve a place, contact Judy Frank, at [jfrank@consumer.org](mailto:jfrank@consumer.org) or at 914-378-2273.

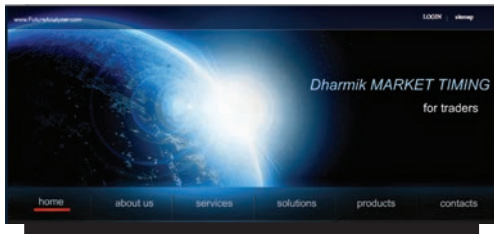


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cordless . . . . .	<b>Oct 11, 36</b>		
smart . . . . .	Mar 11, 41; <b>Sep 11, 48; Dec 11, 32</b>		
shopping apps . . . . .	Dec 11, 10		
Television, online boxes . . . . .	Mar 11, 37		
Television sets . . . . .	<b>Mar 11, 28</b>		
Internet . . . . .	<b>Aug 11, 35</b>		
LCD . . . . .	<b>Dec 11, 36</b>		
picture quality . . . . .	Oct 11, 35		
plasma . . . . .	<b>Dec 11, 36</b>		
Sony, overheating . . . . .	Jan 12, 14		
Thermometers . . . . .			
fever . . . . .	Nov 11, 7		
meat, iGrill . . . . .	May 11, 8		
Tipping, holiday . . . . .	Dec 11, 8		
Toasters & toaster ovens . . . . .	<b>Feb 11, 44</b>		
Top products . . . . .	Nov 11, 21		
Towels, paper . . . . .	<b>Jan 12, 7</b>		
Treadmills . . . . .	<b>Feb 11, 32</b>		
Trimmers, string . . . . .	<b>May 11, 47</b>		
<b>U</b>			
Underwear, women's . . . . .	Feb 11, 10		
<b>V</b>			
Vacuum cleaners . . . . .	<b>Mar 11, 47; Nov 11, 35</b>		
Volunteering, health benefits of . . . . .	Dec 11, 12		
<b>W</b>			
Wall ovens . . . . .	<b>Jul 11, 34</b>		
Washing machines . . . . .	<b>Mar 11, 50</b>		
Water, bottled . . . . .	Sep 11, 7		
Website tricks & traps . . . . .	Mar 11, 7		
Weight-loss tips . . . . .	Feb 11, 28		
Weights, Shake Weight . . . . .	Jul 11, 11		
Wines . . . . .			
cabernets and chardonnays . . . . .	<b>Jan 12, 10</b>		
red blends . . . . .	<b>Oct 11, 10</b>		
rosés . . . . .	<b>Mar 11, 9</b>		
shiraz and zinfandel . . . . .	<b>Dec 11, 11</b>		
white . . . . .	<b>Aug 11, 7</b>		
Wrinkle creams . . . . .	<b>Sep 11, 10</b>		
<b>Y</b>			
Yogurt . . . . .	<b>Jul 11, 10</b>		



## Putting stock in stars

"Good day," said an e-mail that landed in our inbox. "We want to create the foundation of our collaboration in a common field of interest." Intrigued, we went to a listed link. "You have just entered a financial analysis internet site," the Web page said. So far, so good—money tips are welcome these days. We read on. "Our analysis is the result of teamwork." Good again. But then: "The basis for the analysis is ... astrology." Links to articles by team members followed. Sample: "Do moon phases influence financial markets?" Our money went back into the mattress.



## And we'll call you chubby

A New Hampshire reader received this note after asking for info about mortgage rates.



## For virtual calls of nature

Apparently someone at a Borders store in Traverse City, Mich., got testy as the chain went out of business.



## Outsource outrage of the month

A reader notes that his spouse received this blanket from a Native American school in Arizona. Although the source and design would lead you to think it was made by American Indians, the label says otherwise.

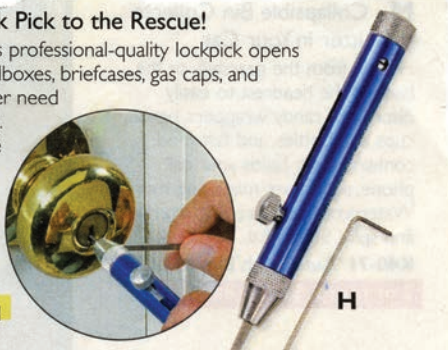


## Hot air

Note the name and claim of the Tiki Island King Windfighter torch, which "Stays Lit In The Wind." Or not.

### H. Locked Out? Kwick Pick to the Rescue!

Invented by a locksmith, this professional-quality lockpick opens padlocks, desk drawers, toolboxes, briefcases, gas caps, and more—in a flash! You'll never need to pay for a locksmith again. All-in-one design is effective with many different USA-made locks. Never picked a lock? No problem—Dyno Kwick Pick comes with easy instructions. Tough aluminum alloy. 4 1/4" long. (Product intended for legal use only.)



## If you say so

We can just imagine a burglar's reaction: "Now that I've read this notice, I'll renounce my life of crime."



## The people's choice

"I'd like to say it tasted of chicken," a Texas reader writes of this Indian snack, "but it didn't."



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YES, there's a simple **"system"** for getting the best possible price on a new car.

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our newest feature  
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**When it's time to talk trade-in**, you should know what your trade-in is worth whether you sell it privately or to a dealership. You can get that information from us too and it costs just an additional \$12.

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# Canada **Extra**

Information from CONSUMER REPORTS® for Canadian readers

## In this special section

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Cell-phone service Ratings	32B
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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 32D, the manufacturer's phone number and Web address in Canada, so that you can call or go online to get information on a model you can't find in the stores. (Many products that aren't available in Canadian stores can be bought online.)

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

Paul Reynolds, *Canada Extra editor*

-  **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.

## SPECIAL REPORT: CELL-PHONE SERVICE

### Readers score Koodo and Fido above Bell Mobility and Rogers Wireless

**F**IDO PROVIDES MORE satisfying service to its customers than Rogers and Bell Mobility among national carriers, with Telus Mobility on a par with Fido. Virgin Mobile CA is more satisfying than any of the major carriers' standard service (billed at the end of each month) and is also among the better carriers for prepaid

service, at which the company specializes.

Those are among the key findings from this year's survey of Canadian readers of CONSUMER REPORTS about their wireless service. And as in this year's Ratings for American readers, small beats big when it comes to satisfaction. The highest-rated carrier for standard service is Koodo, a no-contract carrier that provides low-priced

plans and claims that its coverage serves 93 percent of the Canadian population. Koodo scored better than most other carriers in standard service for value, voice, and texting. Its offerings include a number of smart phones, including the new iPhone 4S.

As in the past few years, SaskTel, which provides service to Saskatchewanians, also



## SPECIAL REPORT: CELL-PHONE SERVICE

fared relatively well with readers. The survey of over 15,000 readers in September 2011 also yielded enough data to rate MTS Communications, which serves consumers in Manitoba.

**Bottom line.** Consider Koodo first, and also give consideration to Virgin Mo-

bile. Virgin is an especially good option for those interested in prepaid service. With standout service from SaskTel, prairie residents have a fine choice, provided they don't want a specific phone that isn't offered by the carrier. We're not able to provide a list of phones from our Rat-

ings of smart phones (page 38) and cell phones (page 40) that are available in Canada. But you'll find that many of the phones are offered by Canadian carriers, especially by those that mostly provide service under contract. Prices of phones may differ from prices in the U.S.

# Ratings Cell-phone service in Canada

In order of reader score. Differences in reader score of less than five points are not meaningful.

Better ← → Worse  
● ● ○ ○ ● ●

Provider	Reader score	Survey results				Support		
		Value	Voice	Texting	Data	Phone	Staff knowledge	Issue resolved
	0 100							

### STANDARD SERVICE

Koodo	74	○	●	●	--	--	○	○
SaskTel	68	●	○	○	○	●	●	●
Virgin Mobility CA	68	●	●	●	○	●	○	○
Fido	63	●	○	○	●	●	○	○
Telus Mobility	61	●	○	○	●	●	○	○
MTS	60	●	○	○	●	--	○	○
Bell Mobility	58	●	○	○	●	●	●	●
Rogers	55	●	○	○	●	●	●	●

### PREPAID SERVICE

Virgin Mobility CA	72	○	○	--	--	--	○	○
Telus Mobility	69	●	○	○	--	●	○	○
Rogers	64	●	○	○	--	●	○	○
Bell Mobility	63	●	○	--	--	--	--	--

### Guide to the Ratings

Ratings are based on responses from 15,054 Canadian ConsumerReports.org subscribers with wireless service surveyed in September 2011. **Standard** customers said they receive a bill after each month of service; **prepaid** customers said they pre-pay for service as needed. While some providers may offer one or both types of service, only providers for which we had sufficient data of the specified type are included in the table. "--" indicates insufficient data. **Reader score** refers to how respondents rated their overall satisfaction with their cell-phone service and is not limited to the factors rated. A score of 100 would mean all respondents were completely satisfied; 80 very satisfied, on average; 60, fairly well satisfied. **Voice** scores are based on the average frequency of problems (no service, dropped calls, call failed, static); **texting** ratings reflect the percent who did not experience any problems (difficulty sending messages, message did not arrive, message arrived much-delayed). Scores for **voice** and **texting** refer to problems in the past week, are adjusted for frequency of use and phone type (smart vs. feature), and are relative (reflecting differences from the average of all providers in all areas). The following reflect mean scores on a scale of "Very poor" to "Excellent": **value** for money, satisfaction with **data** service, ease and speed of reaching support staff through the **phone** system, and support **staff knowledge**. **Issue resolved** reflects the percentage who said their issue was satisfactorily resolved in a timely manner, and these ratings are relative as well. Findings might not reflect the general Canadian population.

# Tablets (Select Ratings) Report and Ratings, page 41

Best choices from our tests of 29 models.

	Brand & model	Price	Screen size (in.)	Overall score
			0 100 P   F   G   VG   E	

## A 9- TO 10-INCH SCREEN All but A1 and A3 use Android.

✓	1	Apple iPad 2 (Wi-Fi, 3G, 32GB)	\$730	9.7	82
✓	3	Apple iPad 2 (Wi-Fi, 32GB)	620	9.7	80
✓	9	Motorola Xoom (Wi-Fi, 32GB)	500	10.1	76
✓	10	Asus Eee Pad Transformer (Wi-Fi, 32GB)	470	10.1	76
✓	11	LG Optimus Pad (Wi-Fi, 3G, 32GB)	550	8.9	74
✓	12	Lenovo IdeaPad K1 (Wi-Fi, 32GB)	450	10.1	73

	Brand & model	Price	Screen size (in.)	Overall score
			0 100 P   F   G   VG   E	

## A 9- TO 10-INCH SCREEN continued

✓	13	Toshiba AT100-004 (Wi-Fi, 32GB)	\$480	10.1	73
✓	14	Acer Iconia Tab A500 (Wi-Fi, 32GB)	470	10.1	73

## B 7- TO 8-INCH SCREEN All use Android.

✓	1	Samsung Galaxy Tab (Wi-Fi, 3G, 16GB)	400	7.0	73
✓	2	Samsung Galaxy Tab (Wi-Fi, 16GB)	300	7.0	72
✓	4	HTC Flyer Tablet (Wi-Fi, 16GB)	500	7.0	68

# Dishwashers (Select Ratings) Report, page 45; Ratings, page 47

Best choices from our tests of 61 models.

	Brand & model	Price	Overall score
			0 100 P   F   G   VG   E

✓	2	KitchenAid KUDE50CX[SS]	\$1,500	79
✓	3	Bosch Evolution 500 SHE55M1[2]UC	950	79
✓	4	Kenmore Pro HE 1317[3]	1,700	79
✓	5	Whirlpool Gold GU2300XTV[Q]	600	78
✓	6	Bosch SHX43P1[2]UC	1,100	77
✓	7	KitchenAid KUDE70FX[SS]	1,800	76
✓	8	Whirlpool Gold GU3600XTV[Q]	900	76
✓	9	Bosch SHE6AP0[2]UC	900	75
✓	10	KitchenAid KUDS30SX[SS]	1,300	75

	Brand & model	Price	Overall score
			0 100 P   F   G   VG   E

✓	11	Whirlpool DU1055XTV[Q] *	\$ 500	75
✓	13	GE Profile PDWT500R[WW]	1,400	74
✓	14	Kenmore Elite 1404[3]	2,000	74
✓	15	Kenmore Elite 1396[2]	1,400	73
✓	16	Kenmore Elite 1392[2]	900	72
✓	17	Bosch Ascenta SHE6AP1[2]UC	NA	72
✓	19	Bosch Integra 800 Plus SHX58E2[5]UC	NA	72
✓	20	Samsung DMT800RH[W]	900	72

\*Lacks an adjustable top rack and tines.

# Autos

Report, page 52; Ratings, page 53

All of the tested vehicles are available in Canada.

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
LUXURY CARS								
Audi A6	\$58,800-\$65,700	2.2	6.0	2.6	16.3	16.0	7.0	10.5
Mercedes-Benz E-Class	60,900-102,100	3.2	8.4	3.6	18.5	14.1	6.1	9.2
Infiniti M	52,400-73,400	2.5	5.9	3.3	16.3	14.0	7.1	9.5
Saab 9-5	39,165-50,355	3.6	9.0	3.2	18.9	16.3	6.9	10.5
SMALL SUV								
Mini Cooper Countryman	27,850-38,003	3.3	8.8	3.6	18.9	12.1	7.1	8.9



## NEEDED: Mystery shoppers!

**CONSUMER REPORTS is currently looking to add to our database of freelance mystery shoppers to bolster our program in major cities throughout Canada.**

If you are detail-oriented, reliable, and e-mail- and spreadsheet-savvy (Excel), and can meet deadlines, you may just fit the bill.

Applicants should live within 32 kilometers of major department stores, discount/wholesale stores, supermarkets, drugstores, and other large retailers.

**As part of your application, please submit the following:**

- Name, address, city and state, plus nearest metropolitan city.
- A list of the major retailers within 32 kilometers for the types of stores listed above.
- Online retailers or shopping websites you are most familiar with.
- Three examples of

store branded/private label products in your area.

- Three product trends you've noticed or problems consumers face when shopping.
- A paragraph (up to 250 words) on why you think you would make a great mystery shopper for CONSUMER REPORTS.

We cannot guarantee regular employment. Shoppers may work less than 10 hours one month and up to 30 hours another month. You will be paid a rate of \$12 U.S. per hour for your work, and you will be required to follow guidelines and directives very carefully. As part of your role, you will be required to demonstrate the highest ethical behavior, which includes never using the name of CONSUMER REPORTS to obtain special or preferential treatment.

**All interested applicants should send requested material to: [shoppers@cro.consumer.org](mailto:shoppers@cro.consumer.org).**

## Contact info

How to reach manufacturers in Canada.

**Acer**  
800-565-2237  
[www.acer.com](http://www.acer.com)

**Apple**  
800-692-7753  
[www.apple.com/ca](http://www.apple.com/ca)

**Asus**  
888-678-3698  
[ca.asus.com](http://ca.asus.com)

**Bosch**  
800-921-9622  
[www.bosch-home.ca](http://www.bosch-home.ca)

**GE**  
877-994-5366  
[www.geappliances.ca](http://www.geappliances.ca)

**HTC**  
[www.htc.com/ca](http://www.htc.com/ca)

**Kenmore (Sears)**  
Contact local Sears  
[www.sears.ca](http://www.sears.ca)

**KitchenAid**  
800-807-6777  
[www.kitchenaid.ca](http://www.kitchenaid.ca)

**LG/T-Mobile**  
888-542-2623  
[www.lg.com/ca](http://www.lg.com/ca)

**Lenovo**  
866-968-4465  
[www.lenovo.com/ca/en](http://www.lenovo.com/ca/en)

**Motorola**  
800-461-4575  
[www.motorola.ca](http://www.motorola.ca)

**Samsung**  
800-726-7864  
[www.samsung.com/ca](http://www.samsung.com/ca)

**Toshiba**  
800-867-4422  
[www.toshiba.ca](http://www.toshiba.ca)

**Whirlpool**  
800-807-6777  
[www.whirlpool.ca](http://www.whirlpool.ca)