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MAY 2012 | CONSUMERREPORTS.ORG

# ConsumerReports®

## Your Supermarket Are You Paying Too Much?

- ▶ We rate 52 chains (that's 42,000 trips!)
- ▶ 10 secrets of smart shoppers



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Sonic

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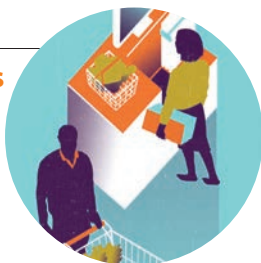
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## Who we are

### 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 with products and services. We're based in Yonkers, N.Y., 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.



## ON YOUR MIND

## Bright lights

I read your test on headlight cleaners in the March 2012 issue. I used to shine my motorcycle headlights with toothpaste, a mild abrasive that's inexpensive and worked just fine.

—Michael Kaloyanides Bethany, CT

## Scam alert

In "No, Your Computer Isn't Infected" (Up Front, February 2012), you reported on free virus-scan software, AVG Anti-Virus 2012. I did the recommended scan. But to delete errors it found, it required me to buy the software. Is this another scam?

—Leonard Chabot Myrtle Beach, SC

**Editor's note** Make sure you click the link



that says "Download Now," not "Start Download" and not an ad or a "sponsored" link.

## Pearly whites

"Dental Do's and Don'ts" (February 2012) was interesting, but you didn't discuss how often to get full-mouth X-rays. My new dentist insisted I get

them, even though I'd had them a couple of years ago.

—Sharon Alwart Brighton, IL

**Editor's note** Adults shouldn't get full-mouth X-rays more than once every five years, and then only if there's a reason. Many adults need only bitewing X-rays taken every 18 months or

so to screen for cavities. If you're told to have X-rays more often, ask why.

## Corrections

To correct a printing error in a valid U.S. Passport, Form DS-5504 is all you need. We said another form might be required, too, in an Ask Our Experts answer in January.

In a February report on chocolate, we said Leonidas has one physical store. It has 15 stores in seven states and the District of Columbia.

A March article on America's top stores stated that Sam's Club offers express shipping to Plus Membership holders. Express shipping is offered for some online items, but it isn't a perk at any membership level.

## SEND YOUR LETTERS TO

ConsumerReports.org/lettertoeditor.

## Ask our experts

**Q** My dermatologist told me I'm at high risk for skin cancer. He advised us to take all compact fluorescent bulbs out of our house because he said they emit A and B radiation, which in, say, reading lamps that are close to people for long periods can be dangerous for someone like me. Is he right?

—Dwight Rettie Morehead City, NC

Almost all fluorescent bulbs emit small amounts of A, B, and C ultraviolet radiation. Covered CFLs, with glass that encases the spiral tube, block most if not all radiation. Ask your doctor whether they would be better for you. Note that they might take slightly longer to brighten than spiral-tube bulbs.

**Q** I want to buy an LCD TV. I have a cable hookup wire but no cable or converter box. Can I get a picture without a box?

—Rick Tello Castaic, CA

Yes, you should be able to get TV without the box. Assuming you are paying for service, you should get a limited number of channels, including HD channels, directly from the cable feed by connecting the coaxial cable to the "ant/cable" input of the TV. Go into the TV menu and under "set up" find the "channel programming" submenu. Select "auto-scan for digital cable channels" (not off-air antenna channels), and the TV will automatically detect the available channels.

**Q** How important is it to buy a dishwasher that can sanitize?

—Jimmie Vaughn Lanesville, IN

You may want to sanitize if you're worried because your son has the flu and has used the family's utensils. A sanitize cycle raises the water temperature to about 170° F, which will kill germs. But there's usually no compelling

reason to have that option, and once you touch the dishes and they're exposed to the air, they're no longer sanitized anyway.

**Q** Regarding your report on water filters, which carafes, if any, are BPA-free?

—Mary Malhiot Bethesda, MD

Of the carafes rated in our report (Lab Tests, February 2012), only the ZeroWater 10-Cup Pitcher is claimed to be free of bisphenol A.

**Q** When I bought my washer, the clerk said the warranty doesn't cover a power surge and insisted that I buy the extended warranty. Do I need a surge protector for a new washer or dryer?

—Pat Peggy Cooper Gig Harbor, WA

Most warranties don't cover power surges, though some extended warranties do. (We don't think extended warranties are worth the money, though.) Surge protectors are a good idea, and if you can use one, make sure it is on a ground-fault circuit.

**Q** Is it more cost-effective to charge my electronic devices while driving my car or in my home?

—Everett Peduzzi Westerly, RI

The difference is minimal, but the cost would probably be smaller for charging in a car. A laptop charger would be the worst case, taking as much as 25 watts, or half the power used by one car headlight.

A laptop and similar devices can't charge directly off the car's 12-volt system. You'll need an inverter to produce 120-volt AC power, or a



**WATER FILTER** ZeroWater claims that its pitcher is free of bisphenol A (BPA), a chemical some studies link to health concerns.

special charger made for 12-volt systems. The more efficient a car's power system, the more it will be affected by additional power usage. (The Prius' engine shuts off whenever the car stops, so there's no "extra" power produced while waiting at a light.) Of course, you'd never want to run a car just to charge something.

## SEND YOUR QUESTIONS TO

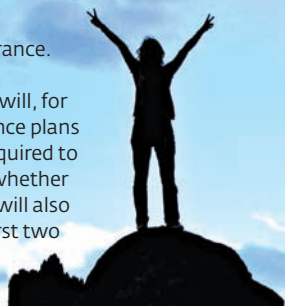
ConsumerReports.org/askourexperts.

This page highlights efforts of Consumers Union, the policy and action arm of Consumer Reports, to improve the marketplace.

## CONSUMER VICTORY

**THE WIN** New disclosures will make it easier for consumers to compare and understand their options for private health insurance.

**WHAT'S IN IT FOR YOU** A "Summary of Benefits and Coverage" will, for the first time, lay out the details of all individual health insurance plans in a standard way. Starting in September, all policies will be required to give specifics of coverage, including out-of-pocket limits and whether policyholders need a referral to see a specialist. The summary will also provide examples of coverage for a variety of situations; the first two will be treatment for diabetes and having a baby; more examples will be added.



# 950,000

That's the number of subscribers who told us about their stuff—and about stores and services—in last year's Consumer Reports Annual Questionnaire, the largest of its kind. So we know that respondents overwhelmingly rate Costco higher than Walmart and that about a third of those who own a 2008 Chrysler Town & Country or Dodge Grand Caravan had premature brake-wear problems. The answers help us develop future articles and form the basis for our reliability ratings. So please fill yours out when it arrives this spring.

### WHERE WE STAND

## Insert risk here

**THE ISSUE** Most medical devices, including artificial hips and pacemakers, don't have to be tested on people to determine that they're safe and effective.



**OUR TAKE** High-risk medical devices such as artificial hips and knees, pacemakers, and surgical mesh should be tested for safety before they hit the market, and there should be a national system to monitor them after they're placed in patients. Instead, they're fast-tracked through a program that Consumers Union believes is much too lax (see "Dangerous Devices," page 24).

Consumers Union's Safe Patient Project is organizing patient-safety activists to speak up to Congress. A well-funded industry lobby wants less scrutiny; instead, CU is working to strengthen oversight, especially of devices that are implanted or life-sustaining. Go to [SafePatientProject.org](http://SafePatientProject.org).

### WINNERS CIRCLE



**MONEY MATTERS**  
Irene Leech is aiming for a fair financial landscape.

A decades-long effort to help Virginia consumers get a fair shake landed the Virginia Citizens Consumer Council one of five finalist spots in Consumers Union's Excellence in Advocacy Award.

As some of Virginia's politicians aim to make it the most business-friendly state, the small VCCC works with volunteers to educate consumers and help them

influence public policy on a range of topics, including electricity, telephones, and payday loans. Irene Leech, an associate professor at Virginia Tech who heads the group, wants to get more people involved in these issues. To learn more, go to VCCC's Facebook page. For details on the award, go to [ConsumerReports.org/consumeraward](http://ConsumerReports.org/consumeraward).

### FROM OUR PRESIDENT

## I need that why?

I once had a plumber tell me that I didn't need to replace my leaky kitchen faucet with a new one. That was refreshing because plumbers make a chunk of their living replacing leaky things, and have you seen the price of kitchen faucets lately? He saved me money, himself time, and both of us hassle when he replaced the old washer unit instead.



That's exactly the sort of practical move that's missing in the huge (and expensive) health-care arena, as more tests and procedures are prescribed with less evidence that they're necessary or even beneficial. The Congressional Budget Office estimates that up to one-third of health-care spending in the U.S. goes for unneeded medical services.

Now some physicians are saying "stop." The American Board of Internal Medicine Foundation has teamed with Consumer Reports and nine medical specialty groups, including cardiology, oncology, and primary care, in a new initiative called Choosing Wisely.

Each specialty has identified five common tests, procedures, or treatments that evidence shows are often overused. Consumer Reports is developing consumer-friendly versions of those "top five" lists to help patients work with their doctors to make informed decisions.

### It's not chump change

An analysis of a similar initiative that focused on 10 overused primary-care activities concluded that more than \$5 billion could be saved if all the recommendations made by the participating physicians were followed, with no worse outcomes for patients.

For example, running imaging tests for uncomplicated lower-back pain early on doesn't affect the course of treatment or help patients get better faster; what it does do is waste money, expose them to radiation, and, at times, lead to more unneeded tests.

For information about our participation in the campaign and useful tips on managing your health care, go to [ConsumerHealthChoices.org/choosing-wisely](http://ConsumerHealthChoices.org/choosing-wisely) starting in early April.

*Jim Guest*  
**JIM GUEST**  
President





# Up front

Tips, trends, everyday products

## Independent sports stores are tops

**I**NDEPENDENTLY OWNED sporting-goods stores and outdoor chains including Bass Pro Shops, Cabela's, and REI make sports-minded shoppers happier than do chains such as Dick's Sporting Goods, Modell's, and The Sports Authority and big-box stores such as Costco, Sears, and Walmart. That's the conclusion from a survey of more than 3,000 CONSUMER REPORTS online subscribers who told us about buying products as varied as treadmills, tents, rackets, and roller skates at walk-in stores.

Of respondents who shopped at independent stores, 84 percent said they were highly satisfied with their experiences, and 81 percent who shopped at outdoor chains felt that way. By contrast, 62 percent of people who bought at sports chains and 54 percent of those who bought from big-box stores were highly satisfied.

### Other highlights

- Independents earned high marks for customer service.
- Independents and outdoor chains were

tops in brand and model selection. Big-box stores came in last. But across all store types, shoppers cited "limited selection of sizes, colors, or styles/models" as their No. 1 problem.

- Independents and outdoor chains also scored highest for product quality. Almost 90 percent of shoppers at those types of stores said the quality was excellent or very good, compared with 71 percent at sports chains and 55 percent at big-box stores.

- Independents and outdoor chains were most likely to provide excellent or very good value. Although readers cited lower prices as a reason to choose big-box stores, just 57 percent who bought there rated the val-

ue as excellent or very good, compared with 75 percent for independents and 70 percent for outdoor chains.

- Shoppers at independents were four times as likely as those at other store types to say that in-store demonstration facilities influenced where they shopped.

- About two-thirds of shoppers researched before buying. Of those who called the store first, most said it helped a lot.

- People who shopped around, waited for a sale, or used a rewards card saved a median of \$25 off their purchase.

**Bottom line.** The next time you need gear, check out independent sporting-goods stores and outdoor chains.

## By the numbers

Shoppers rating each attribute excellent or very good, by store type.

Attribute	Independent stores	Outdoor stores	Sports chains	Big-box stores
Knowledge of staff	86%	73%	50%	39%
Ease of checkout	85	78	64	51
Attentiveness of staff	83	73	50	34
Service quality	82	69	47	26

# Best bagels

**THERE'S NOTHING** quite like a New York bagel—or is there? Although a bagel from a shop near our headquarters in Yonkers, N.Y., set the bar high, a few big brands came close.

Our trained tasters tried eight plain bagels and four with “everything”: onion, garlic, sesame seed, poppy seed, and other toppings. They also tried Thomas’ Bagel Thins, which cut calories and let you eat a bagel sandwich without unhinging your jaw. Per bagel, prices ranged from 31 cents to \$1.44 (for a gluten-free bagel).

**Taste.** Bagels should have a slightly crispy crust, notable “pull” when bitten into (like good Italian bread), chewy innards, and a freshly baked flavor. Plain bagels from Dunkin’ Donuts (fresh), Lender’s (frozen), and Costco’s Kirkland Signature (packaged, at room temperature) and an everything bagel from Dunkin’ Donuts were all very good overall.

After rating the bagels untoasted, we toasted them and tasted again. Toasting sometimes changed the texture. Lender’s Original Plain, for example, lost some de-

## ■ DID YOU KNOW?

A proper bagel isn’t just bread with a hole in the middle. It’s chewy (because of high-gluten flour) and dense (because of a low percentage of water). Malt or sugar, yeast, and salt may be added. The dough usually rests for a long time and then is most often boiled, which creates a glossy crust and helps the bagel keep its distinctive shape in the oven, where it is usually baked at temperatures higher than is used for most other breads.



sirable chewiness, but Udi’s Gluten Free Plain improved: Its crust became less tough, and its crumbly texture became chewier. For others, toasting sometimes reduced off-flavors such as bitterness.

**Nutrition.** It varies with size (Dunkin’ Donuts bagels were biggest; Lender’s, smallest) and with toppings (everything bagels tend to have more fat, probably from seeds). The full-sized bagels have 260 to 350 calories, usually 1 to 4.5 grams of fat, 330 to 660 milligrams of sodium, and 2 to 5 grams of fiber. Thomas’ Bagel Thins have 110 calories per bagel, 1 gram of fat, 210 milligrams of sodium, and 4 grams of fiber, more than most full-sized bagels.

If you have gluten intolerance and choose Udi’s bagels, be aware that they have far more fat, 9 grams, than most others because of the ingredients that replace wheat flour.

Topping a bagel with two tablespoons of cream cheese adds 100 calories and 10 grams of fat; an ounce of smoked salmon adds just 35 calories and 1 gram of fat.

**Bottom line.** Dunkin’ Donuts, Lender’s Original, and Costco are the best choices, but be careful which Lender’s you choose: Its refrigerated Bagel Shop version was just so-so. Thomas’ Bagel Thins are a decent option if you’re watching your weight, though they taste more like rolls than bagels.

BOTTOM LEFT: STEVE WICALISTER/THE IMAGE BANK/GETTY IMAGES



## ■ GOTCHA

# Think twice about service-line repair plans

HomeServe and its subsidiary, Home Emergency Insurance Solutions, sell contracts for a variety of home repairs, promising to send qualified technicians anytime and pitching peace of mind. But some of HomeServe’s mailings have given consumers anxiety instead.

In November, the Massachusetts attorney general alleged that the company’s offers of contracts to repair electric and gas lines and equipment looked too much like utility bills and misled consumers about repair costs and just who was responsible for repairs.

HomeServe didn’t admit wrongdoing but

paid \$75,000 as part of a settlement agreement and agreed to disclose clearly in future promotions that its services are optional and not from a utility. (In 2010 the company had to change its mailings in Kentucky and Ohio after attorneys general in those states found that the company suggested its service was a mandatory utility fee. The company denied wrongdoing and paid \$7,500 to Kentucky and \$10,000 to Ohio.)

Wannabe bills aren’t the only way some home-repair and service-line plans confuse consumers. In December the Illinois Commerce Commission ordered Nicor Gas, a utility, to



# Ratings Bagels

All tested products In order of taste.



Recommended

	Product	Type	Per serving (one bagel)	Comments
Recommended			Cost Weight (oz.) Calories Fat (g) Sodium (mg) Fiber (g)	

## PLAIN

### VERY GOOD

<input checked="" type="checkbox"/>	Dunkin' Donuts	fresh	\$1.08	3.8	320	2.5	660	5	Tastes freshly baked, chewy crust, plenty of pull when bitten, chewy inside. Toasting lessens pull and chewiness.
<input checked="" type="checkbox"/>	Lender's Original	frozen	0.33	2.0	140	0.5	300	1	Tastes freshly baked, chewy crust, some pull when bitten, sweet and yeasty. Toasting removes some pull and chewiness.
<input checked="" type="checkbox"/>	Kirkland Signature (Costco)	packaged	0.46	3.6	260	1	460	2	Some pull when bitten, hints of malt and toasted flavors.

### GOOD

	Thomas'	packaged	0.63	3.4	260	2	500	2	Tastes store-bought, soft crust, hints of grain, yeast flavor, bitterness. Toasting helps a little.
	Sara Lee Deluxe	packaged	0.50	3.4	260	1	400	2	Tastes store-bought; soft crust; hints of yeast, with slight bitterness and a chemical flavor.
	Pepperidge Farm	packaged	0.54	3.5	260	1	330	3	Tastes store-bought, soft crust, gummy texture. Hints of sour, yeast, and grain flavors, bitter and chemical notes. Toasting helps flavor.
	Udi's Gluten Free	frozen	1.44	3.5	280	9	490	2	Far from traditional. Dry, tough crust; cakey, crumbly texture, with rice flavor and toasted notes. Toasting helps texture.
	Lender's Bagel Shop	refrigerated	0.31	2.9	210	2	420	1	Tastes store-bought; soft crust; gummy, pasty texture. Bitter with hint of yeast and sour, and chemical notes. Toasting helps texture.

## EVERYTHING

### VERY GOOD

<input checked="" type="checkbox"/>	Dunkin' Donuts	fresh	1.17	3.9	350	4.5	660	5	Tastes freshly baked, chewy crust, lots of garlic flavor in crunchy topping.
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### GOOD

	Thomas'	packaged	0.57	3.4	270	4	470	3	Tastes store-bought, soft crust, mild toppings, hint of bitterness. Toasting helps flavor.
	Pepperidge Farm	packaged	0.67	3.5	260	1.5	340	2	Tastes store-bought, soft crust, big onion flavor. Slightly chalky texture. Somewhat bitter.
	Sara Lee Deluxe	packaged	0.60	3.4	280	3.5	400	2	Sparse, mild toppings, with store-bought impression; soft crust. Somewhat bitter; brown-spice flavor.

stop promoting Gas Line ComfortGuard, a pipe-repair plan offered by its unregulated affiliate Nicor Services, to customers who called the utility. The commission said the utility failed to provide pertinent information. The Illinois attorney general said that although the plan cost about \$60 a year, most gas-leak repairs cost less than \$50 for consumers without the plan. "Given the facts," says Robyn Ziegler, a spokesperson for the Illinois attorney general, "ComfortGuard is not a necessary product or a good value."

**Bottom line.** Putting money in a fund for a rainy (or leaky) day is smarter than paying \$100 a year for potential service. Keep in mind: •A standard homeowner's insurance policy

generally covers repairs to a property's water- and gas-service lines if damage is accidental, as with an excavation mishap, but doesn't cover normal wear and tear or natural disasters such as earthquakes, says the Insurance Information Institute.

- Gas companies will investigate leaks and are responsible for pipe repairs up to the meter; the homeowner is responsible for repairs beyond, according to the American Gas Association.

- Homeowners are responsible for repairs in their part of the water-service line, but that boundary can vary home by home, so ask your water provider, says the American Water Works Association.



## CLAIM CHECK

# Move furniture on your own?

**The claim.** EZ Moves Furniture Moving System consists of a lever and eight pads you can place beneath furniture's feet so that "even when you're home alone, you can move it ON YOUR OWN!" It works on "all floor surfaces," and the lever "gives you 10x your natural strength." EZ Moves cost us \$19.88.

**The check.** We used the system to move furniture at home and a test rig in our lab, varying the floor surface and the weight and foot style of the pieces to be moved. We measured the force needed to slide the furniture and test rig along the floor and to use the lever.

**Bottom line.** EZ? Sometimes. If your rooms are carpeted and not crowded with furniture, the system might be useful. At best (with rubber-covered feet on carpet), we used just one-fourth the usual effort to move items. With other combos (such as wooden feet on linoleum), EZ Moves didn't make moving easier, though it protected floors. In some cases, the lever provided 10 times our lifters' strength, though it didn't work on a desk with long, narrow legs, and it might be difficult to use with pieces near walls or other furniture.



# CLAIM CHECK

## Should you step on stains?

**The claim.** Bissell's Stomp 'n Go carpet-stain-removal pad "permanently removes tough set in stains," says the claim on the back of the box. You place a 4x8¼-inch pad premoistened with detergent on a stained carpet, step on it, wait until the stain is absorbed, then remove the pad. We paid \$5 for five pads.

**The check.** We stained carpet with blotches of red wine, tomato sauce, coffee, and French dressing. We applied wine and coffee at the carpet's surface and deep down. For each type of stain, we treated one blotch immediately and another after 24 hours. We compared the results with those from Bissell OxyPro, the top-rated product from our earlier stain-removal tests.



**Bottom line.** Put your foot down—and buy a different carpet cleaner. OxyPro did better than Stomp 'n Go on every stain except coffee, and about \$3 worth of OxyPro treated as many stains as \$15 worth of Stomp 'n Go. Stomp 'n Go didn't spread the initial stain before trying to remove it, as can OxyPro or regular dish detergent with water—but if the main stain remains, who cares?

### WATCH OUR VIDEO

Using your smart phone, download the ShopSavvy or the RedLaser app, then scan the code at right.



## How to track a lost pet

**YOU CAN HUNT DOWN** a misplaced iPhone or a complicated address using GPS—why not a lost dog or cat?

We tested three devices for keeping track of pets. Each has a GPS unit that stays on the pet and communicates with the owner. In testing, our “pet” was often an engineer who wandered around our headquarters while another tester tried to find him.

The Garmin and Tagg devices below link to a cell-phone system, and info is accessed on a smart phone or computer. The PetTronix communicates through radio waves with a handset used by the owner. All require GPS communication, so when GPS isn't available, they don't work.

### PetTronix RoamEO \$200 (doesn't require separate service)

**How it works.** Rubber collar with GPS unit and battery compartment communicates by radio with the owner's handset, which has its own GPS and compass. Handset displays distance and direction to the collar, updating continually. Display can be backlit for night use.

**Pluses.** When it worked, it worked well, easily tracking a moving target. Use doesn't require cell-phone coverage or any other subscription.

**Minuses.** The range depends on the terrain and is at most half a mile. Battery charge lasted about 24 hours, and the two batteries must be recharged separately. So if you leave the collar on your pet because you never know when it will wander, you'll

recharge the batteries a lot. The collar is bulky, so it's best for medium or big dogs.

### Garmin GTU 10 \$200 (includes year of service; \$50 annual renewal fee)

**How it works.** Zipped nylon case attaches to pet collar with Velcro. Uses AT&T network to communicate and can be tracked from a browser or app on a smart phone. Up to 10 “geofences” can be configured as virtual boundaries. If the pet crosses one, the owner gets an e-mailed warning.

**Pluses.** Unlimited range. Case stayed securely connected. Geofences were easy to configure. Deluxe plan (\$4.99 extra per month) allows tracking kids or cars, too.

**Minuses.** Battery life can be short, and location info updates slowly in the mode that yields the longest battery life.

### Tagg Pet Tracker \$100 (includes month of service; \$7.95 monthly renewal fee)

**How it works.** Clips to collar. Uses Verizon network and can be tracked from a browser or a smart-phone app. Communication can also be through text messages. One “Tagg Zone” geofence can be configured around the charging station.

**Pluses.** Unlimited range. Tagg and clip stayed secure. Tracking was quick and easy. Tagg Zone was easy to configure.

**Minuses.** Battery life can be short when the device isn't near base station. Tagg Zone's minimum size is about 4 acres—useless if your desired pet area is small.



## Unhappy with an app? How to try for a refund

If you dislike a mobile application you've paid for, it can be difficult to score a refund. When you've dropped a buck or two, that's no big deal, but some apps cost \$30 or more. (GPS navigation apps, for instance, can cost \$50 to \$60.)

For many paid apps, there's no "try before you buy," so look at the app market's user reviews. Take them with a grain of salt, but you can at least find out how the app works. Check sites that review apps, too. (Search for "app reviews.") Again, break out that grain of salt.

For remorseful buyers, here's how to pursue a refund:

### Android Market

Try a new app right away; you have 15 minutes to get a refund. (After that, you must make your case with the app's developer.) Here's what to do within the 15-minute window, according to the Android Market's support page:

1. Launch Android Market on your device.
2. Select Menu, then My Apps.
3. Choose the app you'd like to return. You'll see two buttons: Open and Refund.
4. Pick Refund. The button will now say

Uninstall. Press that to remove the app and start the refund.

### Apple App Store

The official policy: no refunds unless the app is unavailable to download after you've paid, or technical problems ensue. Ask Apple for a refund for a good reason, though, and you might receive it. Here's how to ask:

1. Go to Manage Account (at the left side of the Store screen) and click on Purchase History.
2. Click on Report a Problem.
3. Click the arrow next to the problematic purchase.
4. Click the Report a Problem link next to the problematic item.
5. Click the Problem drop-down menu and select a problem description.
6. Write in any comments, then submit.

### BlackBerry App World

It's difficult to decipher the terms of the sale page, but the bottom line seems to be that all app sales are final, with a few exceptions: if the product isn't available for download when you buy it, for example, or the developer has disabled it. If all else fails, check with your BlackBerry carrier.



### Windows Phone Marketplace

All sales are final and nonrefundable, but in Microsoft Answers, we saw a way to request refunds. One refund is allowed per calendar month, and all requests must be started within 24 hours of the app purchase. Here's what to do:

1. Go to [marketplace.windowsphone.com](http://marketplace.windowsphone.com).
2. After signing in, select Purchase History. On that page, click Details for the application you want refunded.
3. Click Get Support and you'll see Get Help With My Bill and the subtopic Request A Refund For This Purchase. Click that.

## Do e-cigarettes help smokers quit?

More than 45 million Americans smoke cigarettes, the leading preventable cause of death in the U.S. Unfortunately, some stop-smoking methods, including nicotine gum and patches, are less effective than previously thought, according to a recent study in the journal *Tobacco Control*.

Enter battery-powered electronic cigarettes, which deliver vaporized nicotine without tobacco, tar, or other chemicals in regular cigarettes. (But nicotine itself has health risks of its own and is extremely addictive.) Their battery heats a cartridge of liquid nicotine solution, creating an aerosolized mist that the user puffs, or "vapes."

Though e-cigarettes emit no smoke, they deliver an experience like smoking, including the way they're held and the LED tip. Last year, 2.5 million Americans tried one. The cost: up to \$100 for a starter kit, which often includes the e-cig unit, two rechargeable lithium batteries, and five flavor cartridges. (Each cartridge equals roughly one pack of cigarettes.)

### Fans and foes

Proponents of e-cigarettes say they're more healthful than the conventional type and that they might help smokers quit tobacco. Some research backs that up. In a study published last year in the *International Journal of Clinical Practice*, researchers interviewed more than

100 e-cigarette users and found that most were former smokers who had used the devices to help them quit. They'd tried to stop smoking previously an average of nine times, and two-thirds had tried a cessation drug approved by the Food and Drug Administration. A recent review of the available (albeit meager) scientific evidence on e-cigarettes in the *Journal of Public Health Policy* concluded that "electronic cigarettes show tremendous promise in the fight against tobacco-related morbidity and mortality."

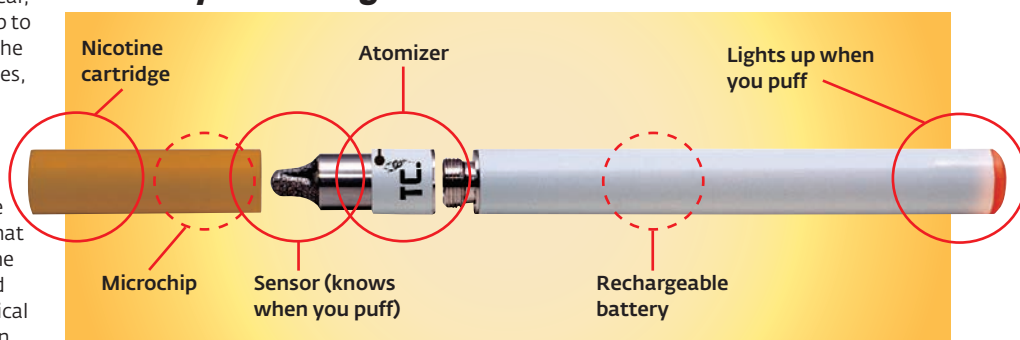
Critics say that too little is known about the safety of e-cigarettes, which are unregulated. Some experts also worry that their availability

online—where a user need only click a box saying he or she is 18—could entice children and teens to try them. So could some of the flavors, such as piña colada and vanilla.

In 2010, the FDA tried to block the sale of some e-cigarette brands, arguing that they're marketed as smoking-cessation devices, which the agency regulates. A court disagreed. Now, some states (including Mississippi, New Jersey, and Utah) and cities have proposed or enacted bans on the sale or use of e-cigarettes.

**Bottom line.** Talk to your doctor before trying to quit smoking with e-cigarettes. Because they're not regulated, safety is a question and you use them at your own risk.

## Anatomy of an e-cigarette



# Watch for these new generics

**WHEN THE BLOCKBUSTER** cholesterol drug atorvastatin (Lipitor) finally became available as a generic last November, people who were taking it looked forward to lower prices. (Lipitor costs about \$191 a month.) But it's only now, six months since the expiration of Lipitor's patent, that prices for atorvastatin have begun to drop. And it could be a year or more before consumers and their health plans see substantial savings.

The same delayed savings will apply to many other widely used drugs whose patents are set to expire by 2013.

Why? The answer has to do with complex laws that govern pharmaceutical patents, says Stephen Schondelmeyer, Pharm.D., Ph.D., a pharmaceutical economics professor at the University of Minnesota. Before a company's patent on a drug expires, manufacturers of generics often race to file lawsuits to challenge the patent. The company that wins gets a six-month exclusive to sell the drug.

That doesn't always happen. But when it does, the market doesn't really open to competition until multiple manufacturers can start making the generic version of the drug. By the end of the first year, the price can drop by as much as half the original cost, Schondelmeyer says. By the second year it can fall by 70 percent, and by year three it can drop by as much as 95 percent of the original amount.

During the next few years an unprecedented number of widely used brand-name

drugs will become available as generics. Ten noteworthy ones are listed in the chart below.

## Medicare alert

Even after a drug goes generic, some drug plans, including Medicare Part D, charge lower co-payments for the branded version than for its generic counterpart. That has to do with agreements between insurers and pharmaceutical companies that make it seem like the name-brand drug is the better deal.

But even if you pay only \$3 a month for

Lipitor (as is the case for people covered by the Cigna RX1 plan, for example), the entire cost of the drug under that plan—\$167—is put toward your “doughnut hole” limit of \$2,930. If you take multiple drugs, that raises the chance that you'll hit the maximum before year's end, at which point you'll start paying half the cost of your brand-name drugs. If you're concerned about cost or maxing out your coverage, ask your doctor to prescribe the generic version of a drug whenever available, even if it means a few extra dollars in co-payments up front.

## DID YOU KNOW?

### The Viagra effect for less

The erectile dysfunction drug Viagra (sildenafil) comes in 25-, 50-, and 100-milligram pills, none of which are slated to become available as generics until 2019. But sildenafil is also sold as Revatio, a 20-milligram pill for pulmonary arterial hypertension that will become available as a generic in September. (Pfizer makes both drugs.) Men who take the 25-milligram dose of Viagra (\$23 a pill) could talk with their doctor about switching to a 20-milligram pill of generic sildenafil (expected to drop to \$10 a pill by March 2013). Those who take higher doses of Viagra are better off staying with the branded version for now. But by 2015, generic sildenafil is expected to cost \$1 a pill; at that point, men who take 50 or 100 milligrams of Viagra might combine multiple 20-milligram pills of generic sildenafil.



## What you could save

Brand-name drug (and generic)	Generic availability date (estimated)	Used to treat	Brand retail price*	Generic price/mo. after 1 yr.	Generic price/mo. after 2-3 yr.
<b>Lipitor (atorvastatin)</b>	November 2011	High cholesterol	\$191 (20 mg)	\$96	\$10-\$57
<b>Caduet (amlodipine/atorvastatin)</b>	November 2011	High blood pressure, high cholesterol	\$240 (10-20 mg)	\$120	\$12-\$72
<b>Lexapro (escitalopram)</b>	March 2012	Depression, anxiety	\$137 (20 mg)	\$69	\$7-\$41
<b>Seroquel (quetiapine)</b>	March 2012	Schizophrenia, bipolar disorder, severe depression	\$128 (25 mg)	\$64	\$6-\$38
<b>Provigil (modafinil)</b>	April 2012	Excessive sleepiness	\$931 (200 mg)	\$466	\$47-\$279
<b>Plavix (clopidogrel)</b>	May 2012	Blood-clot prevention	\$224 (75 mg)	\$112	\$11-\$67
<b>Tricor (fenofibrate)</b>	July 2012	High cholesterol	\$176 (145 mg)	\$88	\$9-\$53
<b>Singulair (montelukast)</b>	August 2012	Asthma	\$180 (10 mg)	\$90	\$9-\$54
<b>Actos (pioglitazone)</b>	August 2012	Type 2 diabetes	\$307 (30 mg)	\$153	\$15-\$92
<b>Propecia (finasteride)</b>	January 2013	Hair loss (men)	\$82 (1 mg)	\$41	\$4-\$25

\*Retail prices for 30-day supply are for the most common dosage and are derived from data provided by Wolters Kluwer Pharma Solutions, which is not involved in our analysis or recommendations.



# Insurance policies you don't need

**WHEN CONSUMERS BUY** insurance such as auto, health, home, and life, they're protected from potentially devastating losses for a relatively small cost. It can be just the opposite with some other types of coverage, where small threats are hyped, overpriced premiums seem reasonable when chopped into daily installments, and promises shrink in the fine print. Here are seven products to avoid.

## 1 Credit insurance

The promise with the two main types, typically sold by lenders when you apply for credit, is that they'll pay off all or some of your loan balance if you die or become disabled. The premium can be "a few pennies a day," one purveyor says.

But credit life insurance can be more pricey than life insurance: \$370 a year on a \$50,000 loan, for example, vs. \$92 a year for the same amount of term life for a healthy 40-year-old man, says Wisconsin's Department of Financial Institutions. And a credit life policy can pay out only on a declining loan balance, whereas a term policy would pay its full face value.

Claims based on disability might be denied because of a pre-existing condition or how broadly the policy defines "totally disabled." You might already have disability coverage at work, and it can be cheaper to buy adequate life insurance coverage.

## 2 Pet insurance

Like health insurance for people, pet policies usually come with exclusions, co-payments, deductibles, yearly or lifetime caps, and other limits, which boost out-of-pocket costs on top of monthly premiums. Last year when we analyzed nine pet policies over the 10-year life of a generally healthy beagle with only common ailments, none paid more in benefits than its total cost, and only five did so when we added some serious hypothetical problems. Instead, budget \$200 to \$300 a year for routine pet health care.

## 3 Cell-phone insurance

These plans provide a replacement if your phone is lost, stolen, or accidentally damaged. Monthly premiums of \$5 to \$7 and deductibles of \$25 for lesser-value phones to \$199 for smart phones can add up. If you file a claim after 18 months, you'll have paid a total of \$115 to \$325, and

the insurer might replace your phone with a refurbished model.

Of course, accidents do happen. But in a 2009 survey we found that only one in five readers who bought a new phone in the previous two years did so because the old one was lost, stolen, or broken. Instead, keep your old phone after you upgrade so that you can reactivate it if necessary.

## 4 Dread-disease policies

You're promised benefits if you get the disease named in the policy. But you'll get nothing if some other malady befalls you. Even if you bet correctly, the devil is in the details. Take cancer policies: Most don't cover related illnesses such as infection and pneumonia, and many have fixed-dollar or time limits on payouts. Some policies pay only for hospital care, but many cancer treatments are often done on an outpatient basis. Protect yourself properly with comprehensive health and major medical insurance.

## 5 ID-theft insurance

Identity-protection services, which charge \$120 to \$300 a year, sometimes throw in up to \$1 million in insurance to pay costs associated with ID theft. But you'll often pay no out-of-pocket costs because of federal protections. And those who do incur costs lose an average of just \$354. Instead, protect your data by placing

a freeze on your credit reports at Equifax, Experian, and TransUnion, and monitor your bank and credit accounts regularly.

## 6 Flight insurance

If you buy a policy right before boarding an airplane that crashes, your beneficiaries collect if you die. But again, you're better off with term life insurance. (Don't confuse flight insurance with the type of coverage that will pay your costs if a health problem forces you to cancel a trip.)

## 7 Child life insurance

"For less than \$1 a week you can give your child a lifetime of life insurance protection," says Gerber Life about its Grow Up Plan. Premiums on a 2-year-old California boy can run from \$3.34 a month for a \$5,000 policy to \$32.08 a month for \$50,000. This whole-life policy is also pitched as a financial "head start" investment that accumulates cash value.

The purpose of life insurance is to protect dependents, so child life insurance is unnecessary. Even if you want coverage for burial costs, you're unlikely to collect since the death rate for those 1 to 14 is low. It's not even much of an investment. In 20 years you'd pay \$1,602 in premiums for a \$10,000 juvenile policy, but the guaranteed cash value would only reach \$1,536.



## ▶ FDA releases more arsenic results

For the second time in three months, the Food and Drug Administration has belatedly acknowledged testing juice samples that turned out to be high in arsenic. The results have only recently been added to an FDA database. This time the omission was in its published data on pear juice and concentrate. In a chart posted in October 2011, the FDA says, results for 26 samples were missing, 23 of which had inorganic arsenic levels at or above 23 parts per billion, the agency's level of concern. The FDA says in each case

the products were refused entry to the U.S. or recalled, or the company was given a warning letter.

The FDA previously amended a list of apple juice and concentrate test samples for an omission of eight samples. The FDA says it is developing new procedures to ensure that future postings capture all sample results. The January 2012 issue of CONSUMER REPORTS underscored the dangers of arsenic in juice. Arsenic has also been found in some foods that use organic brown rice syrup as a sweetener.



# \$425,000

That's the fine paid by Hewlett-Packard to settle allegations (denied by HP) that it failed to immediately alert the Consumer Product Safety Commission that it knew of problems with certain batteries used in Compaq and HP notebook computers. According to the CPSC, the company had collected at least 31 reports involving lithium-ion battery packs, which can overheat and, in some instances, cause flames, fire, and even injuries. The CPSC alleges that HP started receiving complaints in 2005 but waited until 2008 to notify the agency.

### ▶ ON THE RECORD

**'My wife was burned over 60-75% of her body when our friend used the Napa brand citronella fire gel. The gel was ejected from the bottle and flew approximately eight feet before the burning fuel struck my wife.'**



**-CONSUMER COMPLAINT TO SAFERPRODUCTS.GOV** about gel fuel, which the Consumer Product Safety Commission warns poses a risk of burns and uncontrolled fires. The Napa gel has been recalled.

### ▶ CONSUMER NOTES

## Risky baby products

CONSUMER REPORTS recently designated the Dream on Me Bistro high chair and the Bumbleride Indie and Indie Twin strollers as a "Don't Buy: Safety Risk."

The high chair lacks key safety features, such as a "passive crotch restraint," a fixed post that prevents a child from slipping under the tray and falling or getting his head caught between the tray and seat. It also has openings between the arms and seat large enough for a child's leg or torso to slip through. Based on our findings, the Consumer Product Safety Commission has launched an investigation.

Our tests of the Bumbleride Indie and Indie Twin strollers showed that an adjustable, multiuse bar that spans the seat of the Indie and each of the Indie Twin's seats could strangle an unharnessed child if she slips under it. We don't know of any injuries or deaths associated with the two strollers.

The manufacturer has agreed to address our concerns about potential strangulation, and the CPSC announced a recall focused on the strollers' front wheel, which can break, causing the stroller to tip over. If you have a stroller, remove the bar and contact Bumbleride at 800-530-3930 for a wheel retrofit kit. The company says Indie strollers now for sale don't have a wheel problem and no longer come with a multiuse bar. Bumbleride says it will offer an optional bar, which we plan to test.



Dream on Me

**✗ Don't Buy: Safety Risk**



Bumbleride Indie



Bumbleride Indie Twin



## RECALLS

### HOUSEHOLD PRODUCTS

#### Tassimo single-cup brewers and Espresso T Discs

Plastic disc (T Disc) that holds coffee or tea can burst and spray hot liquid and coffee grounds or tea leaves.

Also, espresso discs can clog and spray hot liquid and coffee grounds on you during or after brewing.

**PRODUCTS** 835,000 Tassimo brewers with Bosch brand name and Tassimo Professional Brewers. The Bosch models were sold nationwide and online from June 2008 through February 2012 for \$100 to \$250. There have been 140 reports of brewers spraying hot liquid, coffee grounds, or tea leaves, including 37 reports of second-degree burns. A related recall involves 2.1 million Gevalia, Maxwell House, and Nabob brand espresso T Discs that were sold nationwide and online from August 2011 through February 2012 for \$8 to \$11 in packages of eight or 16. There have been 21 reports of people being sprayed by hot liquids and/or coffee grounds.

**WHAT TO DO** Stop using the brewer and call Tassimo at 866-918-8763 or go to [tassimodirect.com/safetyrecall](http://tassimodirect.com/safetyrecall) to order a free replacement T Disc holder. Do not use the espresso discs, and use the same contact information for more details.



### ELECTRONICS

#### HP fax machines

Machine can overheat, risking fire and burns.

**PRODUCTS** 928,000 HP Fax 1040 and 1050 models sold nationwide and online from November 2004 through December 2011 for \$90 to \$120. There have been seven reports of machines overheating and catching fire, including one report of significant property damage and one minor burn.

**WHAT TO DO** Stop using the machine and disconnect from any outlet. Call HP at 888-654-9296 or go to [hp.com/go/faxrecall/Us-en](http://hp.com/go/faxrecall/Us-en) for rebate on replacement fax machine or partial rebate on certain HP inkjet printers.



### TIRES

#### Toyo Extensa A/S tires, size P225/60R16 97T

Tires may have kink in bead area (which is near rim), which may eventually crack, causing tire to fail and potentially leading to loss of control of vehicle.

**PRODUCTS** 68,763 tires produced from September 2009 to November 2010.

**WHAT TO DO** Toyo will replace the tires free of charge. Call 800-442-8696 for details. Owners may also contact the National Highway Traffic Safety Administration at 888-327-4236.

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# Best & worst supermarkets

More than 24,000 shoppers rate 52 chains and share their top gripes

**IT'S NOT JUST** Donald Trump who's screaming, "You're fired!" these days. One-third of subscribers we surveyed in our 2011 Annual Questionnaire said they had given the heave-ho to a nearby grocery store. Forty-three percent fired a grocer in search of lower prices; about 25 percent cited poor selection, long lines, or lousy food; 17 percent blamed employee rudeness; 14 percent, the crowds.

"I hear a lot of discussion about how to make the in-store experience more pleasing and efficient, and also how to adapt it for changes in the ways consumers shop," says David Orgel, editor of Supermarket News, an industry publication. Orgel suggests that some shoppers may be more discriminating than in the past because they know they have more options, they are exposed to more types of stores selling

food, and they're more sensitive about experiences that may fall short of their expectations.

Of the 24,203 readers who told us about 42,695 supermarket experiences, more than half had at least one complaint about their current store; almost a third cited two or more. Even high-rated chains such as Raley's (in the West) and Wegmans

(mid-Atlantic) gave plenty of readers something to criticize.

The biggest gripe overall: Not enough open checkouts (cited by 27 percent of shoppers), followed by congested or cluttered aisles and advertised specials that were out of stock. Other irritants included inept bagging, missing prices, and scanner overcharges.

## What did you spend on groceries?

The typical weekly grocery bills for households headed by people of a certain age are shown below. The average family size of those surveyed was 2.4 people. The household size was smallest among Matures, averaging 1.9 people, and largest for Millennials, at 3.7.

**Millennials**  
BORN 1981-2000  
**\$69.40**

**Generation X**  
BORN 1965-1980  
**\$107.10**

**Boomers**  
BORN 1946-1964  
**\$106.40**

**Matures**  
BORN BEFORE 1946  
**\$89.60**

Source: FMI U.S. Grocery Shopper Trends 2011



No chains tried their customers' patience more than Walmart Supercenter, Pathmark (Northeast), and Pick 'n Save (Wisconsin), where roughly three-fourths of shoppers had one or more problems. Shoppers who frequented Walmart, the nation's largest grocer and the chain with the most shoppers in our survey, were most likely to be miffed about the lack of open checkouts, out-of-stock regular items, indifferent employees, spotty pricing, and confusing store layout. Thirteen percent of respondents shopping at Pathmark said they'd been overcharged, almost twice the average rate in our survey.

Some problems, including long lines, can even make you spend more. If five or

## Ratings toppers: Wegmans, Trader Joe's, Publix, and Fareway.

more people are ahead of you at the checkout, according to Brian Wansink, director of the Cornell University Food & Brand Lab, you're more likely to buy a nearby treat such as a candy bar.

Fortunately, most consumers have several shopping choices, and some supermarkets gave customers much of what they want. National grocers Costco and Trader Joe's, along with Fareway Stores (Midwest) and Wegmans, offer quality meat and produce, a clean shopping environment, and very good or exceptional prices. All but Costco also earned the highest possible marks for service, defined as employee courtesy and checkout speed. Service is minimal at warehouse clubs such as Costco, and lengthy lines are a trade-off for day-in, day-out deals.

Other chains excelled in some areas but fell down in others. Readers ranked Whole Foods very high overall but said it had exceptionally high prices. Walmart, despite its problems and subpar perishable foods, was praised for low prices. The chain's sibling, Sam's Club, outscored Walmart in every Ratings category except price (in which the two were judged even) and variety (a battle Walmart won hands down).

Over the years, our supermarket Ratings have been very consistent. This is the third straight survey (the earlier ones were in 2005 and 2008) in which Wegmans, Trader Joe's, and Publix (South)

## Small changes mean big savings

You can save hundreds, even thousands of dollars a year by shopping smarter. That's what our reporter Tod Marks found when he shopped for everyday items at several ShopRite supermarkets and Costco Wholesale, a warehouse club, near our Yonkers, N.Y., headquarters. As Marks shopped, he played four different roles:

▶ **Impulsive shopper.** Marks stuck with his preferred brand and size for the products, regardless of price. He didn't clip coupons or use a bonus card.

▶ **Savvy shopper.** Marks scoured ShopRite's weekly flyer, signed up for a savings-club card, visited manufacturers' websites, and mined resources such as Smartsources.com and Facebook for national-brand coupons. He looked for brands and sizes on sale.

▶ **Store-brand fan.** Marks filled his cart with ShopRite's own brands instead of national names. That's a proven way to save, often with no compromise in quality.

▶ **Warehouse-club shopper.** Marks bought at Costco, which has a \$55 membership fee. Economies of scale—oatmeal in 10-pound boxes, diapers in 250-count packages—often yield remarkable bargains, if you have the storage space.

**Bottom line.** By choosing store brands, Marks cut his bill by almost 60 percent, paying about \$66 instead of \$164. He saved almost as much by shopping at a warehouse club. And he cut his impulsive-shopper bill by 43 percent by using coupons and a store savings card. The moral: Try as many smart tactics as possible.

Product	Impulsive shopper	Savvy shopper	Store-brand fan	Warehouse-club shopper
<b>Crinkle-cut potato chips</b>	Kettle, \$5.65/lb.	Herr's Ripples, \$2.73/lb.	\$2.78/lb.	Ruffles, \$2.85/lb.
<b>Disposable diapers</b>	Pampers Swaddlers, \$33.31/100	Pampers, \$22.36/100	\$14.26/100	Huggies, \$15.50/100
<b>Disinfectant wipes</b>	Clorox, \$11.40/100	Lysol, \$9.91/100	\$7.14/100	Clorox, \$3.84/100
<b>Large eggs</b>	Smart Balance Natural, \$3.29/dozen	Eggland's Best, \$1.62/dozen	\$1.40/dozen	\$1.76/dozen
<b>Apple juice</b>	Apple & Eve, \$1.95/quart	Nature's Own, \$1.25/quart	\$1/quart	Mott's, \$0.87/quart
<b>Orange juice</b>	Florida's Natural, \$1.89/quart	Tropicana, \$1.36/quart	\$1.25/quart	Tropicana, \$1.45/quart
<b>Coffee</b>	Starbucks, \$14.65/lb.	Folger's, \$6.20/lb.	\$5.32/lb.	Starbucks, \$8.80/lb.
<b>Peanut butter</b>	Smart Balance, \$4.29/lb.	Skippy, \$3.33/lb.	\$2.30/lb.	Skippy, \$1.68/lb.
<b>Strawberry preserves</b>	Dickinson's, \$6.38/lb.	Polaner, \$3.14/lb.	\$2.48/lb.	Smucker's, \$1.37/lb.
<b>Oatmeal</b>	Quaker Instant, \$4.05/lb.	Quaker Old Fashioned, \$1.90/lb.	\$0.76/lb.	Quaker Old Fashioned, \$0.73/lb.
<b>Extra virgin olive oil</b>	Bertolli, \$10.03/quart	Berio, \$6.27/quart	\$6.62/quart	Berio, \$5.07/quart
<b>Toasted oat cereal</b>	Cheerios Cinnamon Burst, \$7.66/lb.	Cheerios, \$2.85/lb.	\$2.27/lb.	Cheerios, \$2.42/lb.
<b>Mayonnaise</b>	Hellmann's squeeze bottle, \$8.51/quart	Hellmann's, \$3.19/quart	\$3.19/quart	Hellmann's, \$3.44/quart
<b>Dijon mustard</b>	Westbrae Natural, \$5.98/lb.	Grey Poupon, \$4.99/lb.	\$1.32/lb.	Grey Poupon, \$1.60/lb.
<b>Dog biscuits</b>	Rachael Ray Crunchy Treats, \$5.10/lb.	Milk Bone, \$3.10/lb.	\$1.47/lb.	Milk Bone, \$0.50/lb.
<b>Barbecue sauce</b>	Dinosaur Sensuous Slathering, \$3.78/lb.	Kraft Original, \$1.59/lb.	\$1.33/lb.	Kraft Original, \$0.71/lb.
<b>Steak sauce</b>	Tabasco, \$6.06/lb.	A1, \$7.03/lb.	\$4.78/lb.	A1, \$4.26/lb.
<b>Pasta</b>	De Cecco, \$2.49/lb.	Ronzoni, \$0.99/lb.	\$0.88/lb.	Barilla, \$1.11/lb.
<b>Tomato sauce</b>	Patsy's, \$5.33/lb.	Francesco Rinaldi, \$1.11/lb.	\$1.03/lb.	Classico, \$1.23/lb.
<b>Tall kitchen trash bags</b>	Glad Odor Shield, \$22.48/100	GoodSense, \$8.20/100	Grip 'n Tie, \$4.65/100	Glad ForceFlex, \$8.45/100
<b>TOTAL</b>	<b>\$164.28</b>	<b>\$93.12</b>	<b>\$66.23</b>	<b>\$67.64</b>

have been at the top and A&P, Pathmark, Shaw's, and Walmart near the bottom. The rankings of other chains have remained largely unchanged.

## Ways to save

Shoppers have a lot invested in their stores, making 88 trips and spending \$5,060 a year on average. In this sour economy, they're finding more good deals. The Food Marketing Institute, a trade group, says that 36 percent of grocers it surveyed are featuring more promotions and deeper sales; 10 percent have switched to an everyday-low-price policy as an alternative to weekly specials; and 10 percent have added perks to their loyalty programs, including fuel discounts and more generous rewards. In addition, more chains planned to remodel or open new stores in 2011 than in 2010.

Our reporter learned firsthand that a smart shopper can save hundreds if not thousands of dollars per year by using these tactics:

**Take a flyer.** Most grocers play the high-low game: They price some items at or below cost, feature them in flyers to draw you into the store, and hope you'll then buy more profitable items. Be aware that not everything in flyers is on sale.

**Use coupons.** Manufacturers flooded the market with 179 billion grocery coupons last year, and 2.3 billion were redeemed, according to Charles Brown, vice president of marketing for NCH Marketing Services, which tracks promotions. The average face value of a grocery coupon is \$1.17, and more and more manufacturers require you to buy multiple items to land the discount. Coupons also tend to have a shorter life cycle than they used to (the average duration is 10.2 weeks, down from 11.2 in 2007). The source of most coupons remains inserts like those in the Sunday newspaper, but you'll also find offers on websites operated by supermarkets and manufacturers. Fewer than 1 percent of coupons are distributed by e-mail or via mobile applications, though many of the chains in our survey let card-club members download coupons to a smart phone.

**Be loyal.** If your store has a loyalty or bonus-card program and you're comfortable with the privacy policy, join it. A Food Marketing Institute spokeswoman says the organization doesn't know of any chains that sell card lists to third-party marketers but advises consumers to check, because policies differ. Eighty-six percent

## Unit pricing isn't universal

Unit prices make it easy to compare apples to apple slices. They're the cost per ounce, per quart, per pound, or per 100 sheets (for starters) listed on the shelf beneath each product. Beyond telling you whether bulk products are cheaper than packaged ones, unit prices indicate whether a big box of cereal is more economical than a small one, or whether brand X is a better deal than brand Y. Three-quarters of all grocery shoppers rely on them to make comparisons, according to the Food Marketing Institute, a trade association.

Yet there is no federally mandated unit-pricing label similar to the Nutrition Facts on packaged goods. Unit pricing is largely voluntary. Only nine states require it; 10 states have voluntary guidelines, meaning if a retailer chooses to post unit prices, the format must adhere to certain standards. The result: a mishmash of labels that vary from store to store and state to state.

### Aisle by aisle

We sent 13 shoppers to 44 stores in 11 states to examine the labels for everyday items. Of those states, eight—Arizona, Illinois, Minnesota, North Carolina, Ohio, Pennsylvania, Tennessee, and Texas—lack unit-pricing rules. Each shopper encountered examples of inconsistent labels and, on several occasions, no unit pricing at all. For instance:

- Campbell's, Lipton, and Progresso soups were priced by the ounce and by the pound; Tide liquid detergent by the ounce and quart; Kellogg's Froot Loops and Favorite Fruit Rings (a store brand) by the pound and ounce (Kuhn's market, Mountain Township, Pa.).
- Skinny Cow ice cream was priced by the



**SAY WHAT?** Some labels make comparisons tricky.

ounce and per "unit" (Kroger, Cedar Hill, Texas).

- Various sodas were priced by the ounce, liter, and milliliter (Brookshire's, Midlothian, Texas).
- Various laundry detergents were priced by the load and ounce (Giant Eagle, Parma, Ohio).
- No unit price labels were on any laundry detergent (Walmart Neighborhood Market, Surprise, Ariz.).
- Gold Medal Flour was priced by the ounce and pound (Ralph's, San Diego, Calif.).
- Coca Cola was priced by the ounce, quart, or "pack" (of eight) (Bashas' market, Surprise, Ariz.).

of those club members we surveyed were satisfied with the savings they received.

Increasingly, stores are saving their best deals for loyalty-card members. At Harris

## Sales of store brands have increased 40% in the past decade.

Teeter (in the South), for example, club members can double the value of some manufacturers' coupons, download coupons electronically to their cards, receive

special e-mail offers, and get notified when items they regularly buy are on sale. At Fred Meyer stores (mostly in the West), members earn points toward cash rebates, and at Price Chopper (Northeast), AdvantEdge Card members earn a 10-cent-per-gallon discount on fuel for every \$50 they spend.

**Combine deals.** Some chains are expanding discounts. Tops Markets (upstate New York and northern Pennsylvania), for example, offers thousands of weekly specials for loyalty-card customers, as well as buy-one-get-one-free deals, three-day markdowns, mix-and-match 10-for-\$10 deals, and customized coupon offers for people who sign up for text or mobile alerts.





Even in states with unit-pricing rules, enforcement may be spotty. David Sefcik, an expert at the National Institute of Standards and Technology Office of Weights and Measures, an agency within the Department of Commerce that works with the industry to make labeling consistent, says there's been "very little or no recent activity where retailers have received a fine or penalty by states with mandatory unit pricing laws for noncompliance."

**Bottom line.** There ought to be a law. Unit pricing is specifically exempted from the Fair Packaging and Labeling Act, and attempts to regulate it have been unsuccessful. For now, the best way for consumers to compare prices may be to use a calculator.

**Look for longer markdowns.** Continuing a trend that began early in the recession, some chains have extended sale prices beyond the typical week. Stop & Shop (Northeast), for instance, identifies multi-week markdowns with "Real Deal!" signs. Starting in early January and continuing for more than three months, Wegmans froze prices on 223 products.

**Show your age.** More chains are catering to older shoppers by offering bonus savings on certain days. At some Kroger stores (nationwide) and Fry's (mostly in Arizona), a rewards club entitles shoppers at least 60 and 55, respectively, to 10 percent off their purchases on the first Wednesday of the month. At Bi-Lo (in the

South), shoppers who are 60 and older receive 5 percent off on all Wednesdays.

**Shop from home.** Big Y (Massachusetts and Connecticut), Harris Teeter, Safeway (nationwide), and Schnucks (Midwest) are among many chains at which shoppers in some locations can order groceries online or via a mobile phone for in-store pickup or delivery. At Safeway, a personal shopper will gather your order, catering to preferences for, say, firm tomatoes or thick-cut deli meats, and it will be delivered within your choice of available time frames. The charge: \$3.95 to \$12.95. The faster you need your order, the higher the fee. Some chains charge a flat fee per order. Grocers sometimes waive the fee for first-time

customers, so it won't cost anything to give it a try. Also, chains usually back their programs with a satisfaction guarantee.

**Compare unit prices.** That's the most effective way to determine which brand, size, or package type is most economical.

**Buy store brands.** Due in part to lower product-development and promotional costs, store brands can sell for a lot less.

*Continued on next page*

## Eyes on the price

Unit-price labels now differ in size, shape, color, content, layout, and legibility. Here's an "ideal" label we created with input from David Sefcik, a unit-price expert at the National Institute of Standards and Technology. With such a label, comparison shopping could be a breeze—not a burden.

Product name should be clear, conspicuous, and bold.

Size of product should be in U.S. measure and metric equivalent.

Unit and retail prices should be no less than half the font size of product name.

Background tint in retail price box helps differentiate it from unit price.

"New low price" box shows that item is on sale.

Price should be the same size as or slightly larger than regular retail price.

<b>Joe Smith's</b> <b>Tangy BBQ Sauce</b> 16 oz (453 g)	
<b>UNIT PRICE</b> 28.5¢ PER OZ	<b>RETAIL PRICE</b> \$4.56
Retailer bar code goes here along with other retailer data (order codes, pack size, UPC number)	
<b>NEW LOW PRICE</b> <b>\$2.56</b> 16¢ PER OZ	
Thru 5/31/12	

Include expiration date of new price.

### WATCH OUR VIDEO

Using your smart phone, download the ShopSavvy or the RedLaser app, then scan the code at right.



## Praise and criticism

Some stores were better than others at delivering what customers want. Forty-seven percent of Walmart shoppers complained of not enough open checkouts, but just 3 percent

at Trader Joe's voiced that gripe. And 37 percent of Pick 'n Save shoppers said specials were out of stock vs. 1 percent at WinCo. Here are standouts in 10 areas:

### Open checkouts

**WINNER** Trader Joe's

**LOSER** Walmart

### Knowledgeable staff

**WINNERS** Fareway, Trader Joe's

**LOSER** Walmart

### Visible price labels

**WINNERS** Costco, Harris Teeter, Stater Bros., Trader Joe's, Wegmans, WinCo

**LOSERS** Pathmark, Walmart

### Specials in stock

**WINNERS** Whole Foods Market, WinCo

**LOSER** Pick 'n Save

### Price-scanning accuracy

**WINNERS** Costco, Trader Joe's

**LOSER** Pathmark

### Parking

**WINNERS** Aldi, Food Lion, Ingles

**LOSER** Trader Joe's

### Store layout

**WINNER** Fareway

**LOSERS** Giant Eagle, Walmart

### Fresh produce

**WINNERS** Raley's, Wegmans, Whole Foods Market

**LOSER** Walmart

### Baked goods

**WINNERS** Costco, Publix, Wegmans,

Whole Foods Market

**LOSER** None

### Checkout speed

**WINNERS** Fareway, Harris Teeter, Hy-Vee,

IGA, Publix, Raley's, Trader Joe's, Wegmans

**LOSERS** Pathmark, Walmart



Seventy-two percent of our survey respondents said they bought store brands, and 89 percent of those who did said that store brands are as good as or better than national brands. Year after year, our trained tasters often agree. In our survey, Costco, Trader Joe's, Wegmans, and Whole Foods earned top marks for house brands. Aldi (a nationwide chain that sells mostly store-brand items) and Giant Eagle (Maryland, Ohio, Pennsylvania, and West Virginia) are so confident customers will like their brands that they offer a double-money-back guarantee.

**Use a basket if you can.** Shoppers

who wheeled jumbo carts bought more than those wheeling regular or small ones, according to a study by the Cornell University Food & Brand Lab. The effect was more pronounced the longer shoppers stayed in the store. If you need only a few items, skip the cart and consider a hand basket.

**Try self-checkout.** It's one way to beat long lines and crowds. Fifty-eight percent of survey respondents said they had checked themselves out, and almost seven in 10 felt it was a time-saver. However, one-fourth of users said it took too long, roughly the same percentage that said

self-checkout did not work properly or they could not figure out how to use it.

### Avoid traps and tricks

You can save even more by knowing how stores try to make you buy: piling items on end-aisle displays even if they're not on sale because most people assume they are; posting signs such as "5 for \$5" though there's no requirement to buy all five to get the discount; and cutting sliced watermelon into chunks and tripling the price for the added convenience. But those tactics are just the tip of the iceberg.

"Most of the decisions we make in the su-



permarket are little ones, made in the midst of distractions—you're on the cell phone, the kids are fighting," says William Poundstone, author of "Priceless: The Myth of Fair Value (and How to Take Advantage of It)" (Hill and Wang, 2008). "You're operating on autopilot and don't have time to think things through logically. In those situations, as marketers have discovered, we're all very easy to manipulate."

Indeed. We visited local stores and spoke to marketing experts to help you identify where the manipulation may occur and how to resist it.

As you work your way through the store, you'll probably spend somewhat less by shopping clockwise, according to Herb Sorensen, a consultant for retailers and manufacturers. Most stores have their main entrance on the right side, and their customers tend to move coun-

## Vegetables are sold at the entrance, so you'll 'reward' yourself with chips.

terclockwise. When researchers compared those shoppers with people who went through a left entrance and shopped clockwise, they found the clockwise folk spent \$2 less per trip, on average.

The produce department is usually near the entrance, and there's a savvy strategy behind the location. In addition to imparting the message that "this is a fresh, healthy place," Sorensen says, that placement gives shoppers license to buy cake and ice cream as a reward for picking up a head of broccoli or bag of apples. Also, be aware that bright white halogen spot lamps can make fresh food look more luscious. Strawberries appear redder, for instance, and string beans greener.

As you walk the aisles, beware of "bumpouts," displays and shelves that curve or jut out. They catch the eye and make merchandise more tempting, Sorensen says.

Look above and below eye-level shelves. Manufacturers sometimes pay retailers for valuable eye-level placement. In a study by Cornell's Food & Brand Lab, researchers watched shoppers buy 40 percent of the items in their carts from shelves that were within 12 inches of eye level.

When you reach the end of an aisle, don't always expect a sale. Stores routine-

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ly reset endcap and other high-profile displays with sale items the day before the lower price takes effect (but without the new signage). If you grab and go too early, you'll pay full price. Our reporter knows, because it happened to him.

Wherever you see offers for free stuff, make sure there's no catch. “Most purchases are a gamble,” William Poundstone says. “You pay your money and hope that the product is as good as you thought it would be. ‘Free’ is a great sales pitch because you say to yourself, ‘I can’t regret this purchase because I got it for free.’ Unfortunately, you generally have to buy something else with the freebie.”

When you do pay, don't be fooled if the price ends in “9.” It's a practice known as “charm” pricing. Some researchers believe that shoppers see a jar of peanuts priced at \$6.99 as \$6 rather than \$7, making it seem cheaper. Buyers have also been conditioned to associate prices ending in “9” with a bargain, Poundstone says. “We're Pavlov's dogs salivating at the 9 we associate with a discount.”

Finally, at the checkout, double-check the receipt. Six percent of respondents to our survey said that they were overcharged, a figure that has been consistent since our 2005 survey. When an item scans at the wrong price, some chains will give it to you free, but you may have to complain forcefully.

**Bottom line.** If you're unhappy with your store, fire it and look at the Ratings for a good alternative. Though each has its limitations, Costco, Trader Joe's, and Whole Foods are high-rated stores available to many people across the U.S. Wherever you shop, save a bundle by using the tactics we've outlined.

### BY THE NUMBERS

Percentage of shoppers who experienced three or more problems:

**Walmart  
Supercenter**  
**32%**

**Pick 'n Save**  
**27%**

**Tops Markets**  
**21%**

**Pathmark**  
**31%**

**A&P**  
**22%**

**Shaw's**  
**20%**

**Weis**  
**20%**





# Ratings Supermarkets

In order of reader score.

Store	Reader score	Survey findings			
		Service	Perishables	Price	Cleanliness
	0 100				
Wegmans	88	●	●	●	●
Trader Joe's	86	●	●	●	●
Publix	85	●	●	○	●
Fareway Stores	84	●	●	●	●
Costco	83	○	●	●	●
Harris Teeter	83	●	●	●	●
Market Basket	82	●	●	●	●
Raley's	82	●	●	○	●
Hy-Vee	82	●	●	○	●
Stater Bros.	81	○	●	●	●
WinCo Foods	81	○	○	●	●
Whole Foods Market	81	●	●	●	●
Fred Meyer	80	○	●	●	●
King Soopers	80	●	●	●	●
H-E-B	80	○	●	●	●
Ingles	80	●	●	○	●
Schnucks	79	●	●	○	●
Fry's	79	○	●	●	●
Hannaford	79	●	●	●	●
Aldi	79	○	○	●	●
Meijer	79	○	●	●	●
Target/SuperTarget	78	○	○	●	●
Giant (NJ, NY, OH, PA, WV)	78	○	●	●	●
ShopRite	78	○	○	●	○
Big Y	78	●	●	○	●
Kroger	77	○	●	○	●

Better ← → Worse  
● ○ ● ○ ●

Store	Reader score	Survey findings			
		Service	Perishables	Price	Cleanliness
	0 100				
Piggly Wiggly	77	●	○	○	●
Save Mart	77	●	●	○	●
Cub Foods	76	○	●	●	●
Price Chopper	76	○	●	○	●
Smith's Food & Drug	76	○	●	○	●
IGA	76	●	○	●	●
Sam's Club	75	●	●	●	●
BJ's Wholesale Club	75	●	○	●	○
Vons	75	○	○	○	●
Giant Eagle	75	○	●	●	●
Giant (DC, DE, MD, VA)	74	○	○	○	●
Albertsons	74	○	○	○	●
Safeway	74	○	●	○	●
Winn-Dixie	74	○	●	○	●
Stop & Shop	73	○	○	○	●
Acme	73	○	○	●	●
Ralphs	73	○	○	○	●
Pick 'n Save	73	○	○	○	●
Food Lion	73	○	○	○	○
Weis Markets	72	○	○	○	●
Tops Markets	72	○	○	○	●
Jewel-Osco	71	○	○	●	●
A&P	70	●	○	●	●
Shaw's	69	○	○	●	●
Walmart Supercenter	69	●	●	●	○
Pathmark	68	●	○	○	●

## Guide to the Ratings

Ratings are based on 24,203 responses to a survey conducted by Consumer Reports National Research Center. Respondents could tell us about their experiences at one or two stores between April 2010 and April 2011. The survey reflects 42,695 visits to supermarkets, supercenters, warehouse clubs, and limited-assortment stores. The findings represent the experiences of our readers, not necessarily those of the general population. **Reader score** measures overall satisfaction with the shopping experience and isn't limited

to the criteria listed in the table. A score of 100 would mean all respondents were completely satisfied; 80 means they were very satisfied, on average; 60, fairly satisfied. Differences of fewer than 5 points are not meaningful. Scores for **service**, **perishables**, **price**, and **cleanliness** are relative. Service combines satisfaction with employee courtesy and checkout speed. Perishables refers to the quality of meat and produce. We lacked sufficient data to rate the quality of perishables at Save Mart.



**SURGEON AND VICTIM** Orthopedic surgeon Stephen Tower, M.D., was injured by the same metal-on-metal artificial hip he implanted in patients.

# Dangerous devices

Most medical implants have never been tested for safety

**T**ENS OF MILLIONS of Americans live with medical devices implanted in their bodies—artificial joints, heart defibrillators, surgical mesh. And it's a safe bet that most of them assume that someone, somewhere, tested the devices for safety and effectiveness.

But that is rarely the case. For most implants and other high-risk devices brought to market, manufacturers do nothing more than file some paperwork and pay the Food and Drug Administration a user fee of roughly \$4,000 to start selling a product that can rack up many millions of dollars in revenue. Often, the only safety “testing” that occurs is in the bodies of unsuspecting patients—including two of the three people whose stories are told in this report.

As for the smaller number of high-risk

products for which advance safety studies are required, government rules allow them to be sold based on studies that are smaller and less rigorous than those required for prescription drugs.

“Standards for devices exist, they just don’t make sense,” says Diana Zuckerman, Ph.D., a vocal critic of the current system and president of the National Research Center for Women & Families, a nonprofit advocacy organization.

In 2011, a panel from the prestigious Institute of Medicine said the FDA should

**Often, testing is only in the bodies of unsuspecting patients.**

overhaul its device regulatory system because it fails to ensure patient safety before and after products go on the market. Instead, Congress is now debating a new law that would keep the present system virtually intact and ratify an agreement between the FDA and industry to get devices on the market even faster.

The FDA believes “the program has served American patients well,” says Jeffrey Shuren, M.D., director of the agency’s Center for Devices and Radiological Health. “As a responsible guardian of public health, the FDA believes it’s a challenge to eliminate a program without having a better alternative.”

But an investigation by CONSUMER REPORTS, which included interviews with doctors and patients and an analysis of medical research and a device-safety database maintained by the FDA, shows



the following areas of concern:

- Medical devices often aren't tested before they come on the market. "What they're doing is conducting clinical trials on the American public," says Dan Walter, a political consultant from Maryland. His wife was left with heart and cognitive damage from a specialty catheter, cleared without testing, that malfunctioned during a procedure to treat an abnormal heartbeat.

- There's no systematic way for the government, researchers, or patients to spot or learn about problems with devices. "A coffeemaker or toaster oven has a unique serial number so if a problem is found, the company can contact you to warn you. Your artificial hip or heart valve doesn't," Zuckerman says. "Your doctor is supposed to notify you of a problem but may not be able to if he has retired or passed away."

- Without major changes in the system, there's not much that patients can do to protect themselves.

Below are stories from three people, injured by three very different devices, that highlight the dangers consumers face in the current marketplace.

## Surgical mesh: No testing

In 2007, Janet Holt of Floresville, Texas, felt swelling in her pelvic area. She went to her gynecologist, who told her that her bladder and uterus had prolapsed—dropped out of their normal position within her pelvis. The doctor recommended a hysterectomy and bladder lift.

"He talked about building a little bird's nest to hold my bladder up," Holt recalls. "He said I'd be back at work in two weeks." She has yet to return to work full-time on the cattle ranch and small chain of restaurants she runs with her husband.

The "bird's nest" turned out to be a sheet of synthetic mesh that was implanted by instruments inserted through the walls of her vagina. In the weeks and months after surgery, she says, "I was in such pain I couldn't sit, I couldn't stand, and I could hardly walk." Over time, the mesh shrank and shifted, eventually working its way back out of the vaginal wall, an experience Holt likens to "open cigarette burns with each step you take. It's complete torture."

Today, after eight surgeries to adjust and remove the mesh, Holt, who is suing the device manufacturer, says she has been left with painful nerve damage in one leg. "I'm 54 years old and it has totally ruined my life," she says.

Holt is one of hundreds of thousands of women implanted with transvaginal mesh for prolapse repair and bladder support since the first such products came on the market in the early 2000s. Manufacturers marketed the mesh packaged in a "kit" with tools for insertion and marketed them to doctors as an easier way to do a surgery that had traditionally required special additional training.

"The companies were saying, 'The salesman will show you how to do it,'" said Lewis Wall, M.D., professor of obstetrics and gynecology at Washington University in St. Louis. Despite thousands of reports of adverse events, repeated alarms by women's-health and consumer-health advocates, and multiple lawsuits, these

products are still being sold—and are still classified as "moderate risk" devices.

In an August 2011 petition asking the FDA to take transvaginal mesh off the market, the consumer advocacy group Public Citizen called it "a 'poster-child' example of the fundamental failure ... to protect the public's health and welfare."

How did it happen? The mesh manufacturers took advantage of a loophole in the law that allowed them to grandfather their products onto the market without any advance safety testing.

Here's how it works: Before 1976, a manufacturer could sell virtually any medical device at will. That year, a new law for the first time classified medical devices into three risk categories, with clinical data re-

## How to protect yourself

**Here are a few steps you can take to guard against the risks posed by dangerous medical devices.**

### ■ Consider alternatives

Ask your doctor what will happen if you don't get the implant. Many women who received transvaginal mesh for prolapse repair, for example, probably never even needed surgery.

"Pelvic organ prolapse is almost never a life-threatening condition. It's a quality-of-life issue," explains Daniel S. Elliott, M.D., assistant professor of urology at the Mayo Clinic College of Medicine. "The overwhelming majority of women do not need to have surgery. If you're not bothered by it, then don't do anything. I think many patients weren't adequately informed about that."

You may also have non-mesh alternatives. Elliott says he and other well-trained pelvic surgeons routinely repair prolapses with techniques that don't require any mesh at all. On the other hand, people ill enough to need an implantable defibrillator for their heart may not have another choice.

### ■ Research the device

The Food and Drug Administration's website, FDA.gov, has a wealth of information about device safety warnings, complaints, and recalls, easily accessible by typing the name of the device into the site's search box. It's also worth searching Google. If the results include a lot of law firms looking for clients injured by the device, that's a sign to ask your doctor some hard questions.

For an optional device like a Lap-Band or breast implant, look around the Internet for patient forums. Though the information there isn't validated, you'll get a sense of whether patients are reporting trouble with the device.

### ■ Write down what you got

If your doctor doesn't give you information about the brand name, model, and serial number (if it exists) of your device, ask for it. If you learn of a warning or safety recall, from the FDA or elsewhere, you'll know whether yours is one of the problem models.

### ■ Stay alert—but don't panic

If you learn that there are problems with your device, contact your doctor and ask what warning signs to watch for. Also go to the FDA website to read up on official warnings and find out whether it's safe to keep the device in your body.

For example, if you have a metal-on-metal hip, call your doctor if you have pain or other unusual new symptoms, such as heart, vision, hearing, emotional, or neurological problems, because all of those might be signs of a reaction to the device. You might also want to get your blood tested for high cobalt levels, a sign that the hip is deteriorating.

But don't assume that all problematic devices have to be removed. For example, pelvic surgeons say they often get calls from worried women who have had mesh repairs. "If the mesh is not causing any problem, don't do anything because getting mesh out is very difficult and dangerous," Elliott says.

quired only for devices in the highest-risk category, Class III.

The FDA has yet to fully enforce even that minimal testing requirement. The agency routinely clears new devices in all three risk classes without clinical testing as long as manufacturers can show they are “substantially equivalent” to a device that has already been on the market.

And that’s exactly what the makers of transvaginal mesh did. The mesh kits were cleared based on their “substantial equivalence” to an earlier mesh used to repair abdominal hernias that was sold as long ago as the 1950s, even though the kits were designed to be used in a different part of the body and inserted laparoscopically, not through open surgery.

“You’re putting a foreign object into the pelvis through a contaminated space, so there’s a very high potential risk of infection,” Wall says. “But there weren’t any clinical trials done with these products before they hit the market.”

“The paradox is that companies go to the FDA and claim that a device is ‘sub-

## The FDA waited a decade to ask mesh makers for safety studies.

stantially equivalent,’ but when they market it, they claim it’s ‘new and better,’” says Rita Redberg, M.D., a professor of medicine at the University of California, San Francisco, and editor of the *Archives of Internal Medicine*. The clearance process costs manufacturers next to nothing; they pay the FDA a user fee of \$4,049.

It was only in January 2012, about 10 years after the first kits hit the market, that the FDA took action. It ordered 33 companies to conduct the first-ever post-market safety studies of the products. The agency is thinking of reclassifying those mesh kits to the highest-risk Class III.

But Shuren, at the FDA, notes that with the government’s rule-making process, “from the time the FDA decides to

upclassify a device to the time it can actually do it can take years.”

### Lap-Band: Minimal testing

In 2009, after many unsuccessful diets, Lisa Wilson, then 46, a pharmacy technician from Seattle, received the Lap-Band adjustable gastric band.

The implanted band constricts the size of the stomach to make it difficult to eat large quantities of food. In fact, the opening left to Wilson’s stomach was so small that she had difficulty eating even small amounts of food. It also caused her to throw up almost every day.

But she stuck with it, losing 70 pounds, until a routine endoscopy in December 2010 revealed that the band had cut into her stomach lining and would have to be removed immediately. She developed a post-surgical infection that resulted in a partially collapsed lung and an eight-day hospital stay. Wilson says she has regained half of the weight she lost.

More than 650,000 Lap-Bands have been sold worldwide, according to the 2010 annual report from its manufacturer, Allergan. It’s among the minority of devices so novel that manufacturers can’t find an older product for grandfathering.

Those products usually have to undergo advance testing for safety and effectiveness to get the FDA’s approval for marketing. But the tests aren’t nearly as rigorous as those required for prescription drugs, even though, as Redberg notes, “if you have a problem with a drug, you can just stop taking it, but you can’t do that for a device implanted in your body.”

And the FDA charges device manufacturers only \$220,050 to review a new device, compared with the \$1.84 million it charges to review a new drug application.

If Lisa Wilson had seen the lone study on which the approval was based, she might not have been surprised by her problems. Of the 299 people in the study, 51 percent reported nausea, vomiting, or both, and 25 percent had their bands removed before the end of the three-year study because of complications or failure to lose enough weight.

“Imagine if a car had a recall rate that high,” says John Santa, M.D., director of the Consumer Reports Health Ratings Center. “Consumers and regulators would be up in arms. But in the world of medical devices, these things often stay hidden.”

The Lap-Band clinical trial was fairly typical of such pre-marketing studies.



**SURGICAL-MESH MESS** Janet Holt says complications from a device used to correct her uterine prolapse left her “in such pain I couldn’t sit, I couldn’t stand, and I could hardly walk.”





**LAP-BAND PROBLEM** Lisa Wilson's weight-loss device had to be removed after it cut into her stomach. A post-surgical infection led to an eight-day hospital stay.

Redberg and colleagues looked at 123 studies done on high-risk cardiovascular devices that received FDA approval between 2000 and 2007. Only 27 percent met the gold standard of being randomized clinical trials, according to the report, published in December 2009 in the *Journal of the American Medical Association*.

### Metal hips: Missed alarms

If any patient should have gone into a hip replacement fully informed, it was Stephen Tower, M.D., 55, an orthopedic surgeon from Anchorage, Alaska. Instead, he became the victim of another device that was grandfathered onto the market without clinical testing.

In this case, it was an artificial hip introduced in 2005 by DePuy, the orthopedic division of Johnson & Johnson. Called the ASR XL, it was distinctive because both components—the ball at the top of the femur and the socket liner inside the pelvis—were made of chrome-cobalt metal.

The FDA cleared it without clinical test-

ing based on “substantial equivalence” to earlier devices, though such metal-on-metal hips had long been on the agency’s high-priority list for requiring advance clinical trials.

The all-metal hips were supposedly a great advance over hips with the traditional plastic socket liner, Tower recalls. “The main reason hips traditionally failed was because of plastic wear,” he says. “The metal-on-metal hip was being promoted not only commercially but in the medical

literature as being a solution for patients like me, who wanted to return to no-holds-barred physical activity.”

By 2006, Tower’s arthritic hip had forced him to give up practically all the outdoor pursuits he had moved to Alaska to enjoy. He had a DePuy ASR XL implanted in May of that year, and “within six weeks I did a double century bike race,” he says. He was so enthusiastic that within 10 months he had put various models of metal-on-metal hips in six of his patients.

But by the time a year had passed, it became clear that something was wrong. His hip was “pretty much constantly painful” and the chromium and cobalt levels in his blood “were notably high,” he says. Then he started noticing other problems, such as disturbed sleep, mood swings and anxiety, hearing loss, visual problems, and tinnitus.

Throughout that period, he says, he repeatedly questioned DePuy engineers, design surgeons, and sales representatives, “and they’d say, ‘Geez, Steve, we haven’t heard of this.’”

Tower’s symptoms became so severe at times that he was unable to work. Meanwhile, his research, some of which he has since published in medical journals, was uncovering evidence that metal debris from joint implants can cause what he describes as “profound poisoning.”

After having the hip removed in 2009 and replaced with a new one made of ceramic and plastic, his symptoms have markedly improved.

In August of 2010, DePuy recalled all 93,000 ASR XL hips worldwide after it became clear that the device was failing far more often than average and producing serious injuries. While it’s unclear how many people actually have had to have their artificial hip removed, an article in the *British Medical Journal* called it “one of the biggest disasters in orthopaedic history.”

### ■ SURVEY SAYS

**38%**

of adults said they were “very” or “extremely” concerned about implant safety.

**17%**

of adults said they had an implanted medical device.

**3%**

of adults said they had an implanted cardiovascular device.

Source: Consumer Reports National Research Center survey of 1,000 adults nationwide, February 2012.

Although the hip was invented and manufactured by an American company, the recall occurred because as early as three years previously—even as DePuy's engineers were assuring Tower that the hip had no problems—regulators in Australia, England, and Wales were noticing serious problems.

They were able to do so because they have national joint registries—a list of every joint implanted—and the ability to track how patients fare with various models. There is no such national registry in the U.S., although Kaiser Permanente has a large private one.

The FDA has a voluntary system whereby doctors, manufacturers, and patients can report problems with medical devices. And though experts estimate that only a fraction of device problems ever get reported, from 2009 through 2011, the agency received 20,518 reports of injuries from metal-on-metal total hip replacements. Of those, 15,137 concerned

## HAVE YOU HAD A PROBLEM?

### Tell us about it now

If you've had a problem with an implant or a medical device, please tell CONSUMER REPORTS about your experience. Your information is kept confidential (unless you indicate otherwise) and your story helps us monitor medical problems, research future articles, and push for reform.

To help, just go to [safepatientproject.org](http://safepatientproject.org) and click on "Share Your Story" or click on "Act Now" to help us work for change.

the now recalled DePuy hip. Many of the remaining complaints concerned several other brands and models that are still on the market in the U.S.

The 2011 Institute of Medicine panel concluded that the FDA's ability to spot problems is so inadequate that it's "impossible to confidently draw broad conclusions about the safety and effectiveness of products that are on the market."

## How to fix the system

Consumers Union, the advocacy arm of Consumer Reports, agrees with the Institute of Medicine that the current system of medical-device regulation doesn't protect patients from harm. Consumers Union recommends that the FDA:

- Require that implants and other "life-sustaining" devices be tested at least as rigorously as drugs.
- End the practice of "grandfathering" high-risk new implants and life-sustaining devices.
- Create a "unique identifier system," or IDs for implants, so that patients can be quickly notified about recalls and safety problems.
- Create national registries so that problems can be spotted quickly and patients notified.
- Increase the user fees paid by manufacturers for regulatory review so that the FDA has enough money to do its job. (See "Where We Stand," on page 6.)

## Cardiac devices are risky, too

**Cardiac devices dominate the list of reports to the Food and Drug Administration of deaths and injuries. Here are three devices that have had significant problems in recent years:**

### ▶ Implantable cardioverter-defibrillators.

Since 2009, the FDA has received reports of close to 29,000 deaths or injuries from these devices, by far the most for any device type, according to our analysis of the FDA's database of adverse events. Implanted in more than a half-million Americans with serious heart disorders, the defibrillators detect abnormal rhythms and administer shocks to correct them.

The most troublesome aspect of the devices are the leads—wires that connect them to the heart. There have been two major recalls, in 2007 and 2011, of defective leads, the Medtronic Sprint Fidelis and the St. Jude Riata, after they had already been implanted in almost 350,000 patients. Patients with the device leads require close monitoring and face the prospect of having to have them surgically removed.

In congressional testimony in 2009, Boston cardiologist William Maisel, M.D., described what happened to a patient of his: "The simple act of removing his shirt over his head caused his ... lead to fracture. [He] suffered a cardiac arrest in front of his wife." The patient survived but never fully recovered.

▶ **Vena cava filters.** These devices are placed in the vessel that returns blood from the lower body to the heart to prevent pulmonary embolism, a life-threatening condition caused by blood clots breaking loose from the leg and traveling to the lungs. Some 200,000 people get such filters each year.

Many should be removed once the danger of clots has passed, but often aren't. In a November 2010 study in the Archives of Internal Medicine, Pennsylvania researchers found that pieces of the Bard Recovery filter had broken off and migrated elsewhere in the body in one of four study patients. One patient needed open-heart surgery.

"Remarkably," wrote cardiologist Rita Redberg, M.D., of the University of California, San Francisco, in an editorial accompanying the report, these filters "were considered Class II by the FDA—the same risk category of mercury thermometers—and received approval without any clinical data of safety and effectiveness."

"The devices were being used inconsistent with their FDA clearance," says Jeffrey Shuren, M.D., director of the agency's Center for Devices and Radiological Health. "We don't have authority to do something about that." If you've received the device, ask your doctor whether it has been removed.



**RECALLED** Defibrillators have been recalled 90 times in seven years.

### ▶ Automated external defibrillators.

Found in airports and other public buildings, these devices are designed so that bystanders can operate them. AEDs automatically diagnose abnormal heart rhythms and deliver shocks to people in cardiac arrest.

The problem is, they don't always work. The industry has conducted about 90 recalls over the past several years, affecting hundreds of thousands of devices. Between 2009 and 2011, the FDA received reports of 72 injuries, 686 deaths, and 20,667 malfunctions connected with the devices. Arizona researchers found that in most cases the machines weren't able to diagnose the abnormal rhythms properly or failed to deliver the recommended shock.

The FDA is considering whether to downgrade AEDs from the highest-risk category to moderate-risk.





# Student debt: Your threat

It can have an impact on the entire economy

**M**ORTGAGE FORECLOSURES and credit-card debt have drawn the spotlight since the financial collapse of 2008. But there's another type of debt that could have potentially crippling ramifications for the U.S. economy: student debt.

How bad is it? The amount of student debt owed by Americans exceeded outstanding credit-card debt for the first time in 2010. Two-thirds of college graduates carried some debt at commencement, and the Class of 2010 had an average of \$25,250 in student debt, up 5 percent from the previous year, according to The Institute for College Access & Success (TICAS), a nonprofit policy research group in Oakland, Calif. All in all, it's estimated that Americans owe more than \$900 billion

in federal and private loans.

At the same time, the depressed job market makes repaying those loans harder than it has been in decades. Two-year default rates on all student loans hit 8.8 percent for those starting repayment in 2009, with 15 percent defaulting at for-profit institutions, according to the Department of Education. Unlike most consumer loans, student debt generally can't be discharged by declaring bankruptcy. Lenders can recover the funds by garnisheeing wages, tax refunds, even part of Social Security checks.

All of this has consequences not just for graduates but also for the larger society. Some economists fear that lingering student debt will force many young adults to delay or defer important milestones, such

as marriage and starting a family, which can impede a full economic recovery. Young workers with wrecked credit from unaffordable student loans, for example, won't be able to get mortgages to purchase homes, which could make it even tougher for retirees and others to sell theirs.

## Why so bad?

Jeff Macaluso, 42, a website designer from Dobbs Ferry, N.Y., says his student debt, about \$59,000, is "like a prison sentence." His monthly payment is \$430 under an income-contingent repayment option for a federal consolidation loan he took out about a decade ago, although he tries to pay \$630 a month to keep the interest down.

Macaluso, who earned a master's degree in fine arts in 1997, says he's happy with the career opportunities his education afforded him. But paying off the debt is preventing him from saving for retirement and might deter him and his wife from buying a home. The debt, with more than 6 percent interest, "just grew and grew and grew," he says, "and I'm saddled with it unless I make twice as much as I'm making."

Student indebtedness has been rising sharply since the early 1990s. Skyrocketing college tuition and fees, which have risen faster than inflation, are factors. And government grants and scholarship aid haven't kept pace with costs, resulting in a greater reliance by students and parents on borrowing to fill the gap. And in recent years, as home values have declined, more families that may have relied on home equity for financing are looking to student and parent educational loans from government and private lenders.

TICAS estimates that at least 22 percent of student debt from nonprofit four-year colleges for the Class of 2010 was composed of private loans outside the federal student loan program. Those private loans often come with high variable interest rates, additional loan fees, and strict repayment requirements, even if borrowers are unemployed or can't afford the payments.

Spiraling student debt is also linked to the growing number of for-profit colleges, whose students have a much higher rate of borrowing than those at public and private nonprofit institutions and are more likely to be steered to private lenders. In 2011 the National Consumer Law Center addressed why students at for-profit colleges defaulted on their debt

at a higher rate than those at other types of educational institutions. The NCLC attributed this to poor academic completion and job placement rates at many for-profit schools.

Whatever type of college students attend, they don't always understand what they're getting into when they take out loans. Kristine Beckford, 22, a senior majoring in communications at Lehman College in the Bronx, N.Y., part of the public City University of New York, says she already owes \$60,000 to \$70,000 in student loans for two other colleges she attended before transferring to Lehman. She's not certain whether they are federal or private loans ("What's the difference?" she asked). The first in her family to attend college, Beckford says she received virtually no financial-aid counseling.

## Getting out from under

For the more than 36 million people saddled with federal student debt, what's the best strategy for digging out of the hole? "There are ways to manage it in tough times if you don't stick your head in the sand," says Lauren Asher, president of The Institute for College Access & Success.

Complicating matters is the fact that the various types of student loans have different repayment options. Most federally backed student loans must be repaid starting six months after the borrower leaves school or drops below half-time status. Some private loans and unsubsidized federal loans require interest payments even while the student is still enrolled.

The average college student has eight to 12 loans for his undergraduate education, says Mark Kantrowitz, publisher of FinAid.org, a financial-aid website, and Fastweb.com, a scholarship-information

### DID YOU KNOW?

# 9.1%

That's the unemployment rate for young college graduates in 2010, the highest annual rate on record, says The Institute for College Access & Success.

site. Borrowers can begin to get a handle on their debt by following these steps:

**1 Find out how much you owe and to what lenders.** Upon graduation or sooner, line up all your student loans and determine the loan servicers, balances, interest rates, repayment options, and grace periods. You might have a combination of private loans and those that are backed by the federal government. If you don't know the types of loans you have, call or write to the student-aid office at your college or your lenders, or go to *nslds.ed.gov*, the website of the National Student Loan Data System, a database of federal loans (private ones aren't included).

**2 Choose a repayment option.** Federal loans, which include Perkins and Stafford loans and Direct PLUS loans (usually taken out by parents), offer several repayment options. The standard term is 10 years, and the minimum monthly payment is \$50. Stretching out your payments over a longer period reduces the monthly amount but results in higher total interest expenses over the life of the loan.

Take a hard look at your financial situation and your income potential for the next few years. You'll save money and

get out of debt faster by paying off your highest-interest loans as quickly as possible, which you can do by making the largest payments you can afford each month and applying extra to the principal.

If your total debt exceeds your first-year income after graduation, you probably won't be able to afford payments under the standard 10-year repayment plan. In that case, you may want to consider these repayment options, which result in smaller, more affordable monthly payments:

**Graduated repayment.** Payments start small and increase every two years, which could be a good option for those who expect their income to increase steadily over time, such as some physicians.

**Extended repayment.** If you're at least \$30,000 in debt and didn't have a loan before Oct. 7, 1998, you can choose this option, which gives you up to 25 years to repay your loans. You can choose fixed or graduated payments.

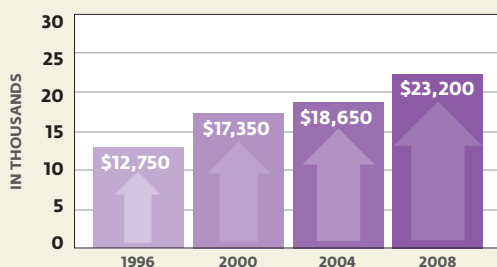
**Income-contingent repayment.** Your payments are calculated annually on the basis of your adjusted gross income (plus your spouse's income if you're married), family size, and the total amount of Direct loans over a 25-year maximum repayment schedule. After 25 years of payments, any unpaid balance will be discharged, but you might have to pay taxes on it. This option is for Direct loans only.

**Income-based repayment.** Monthly payment is based on your income (and your spouse's if you file together) and family size, and is adjusted annually. Last fall President Obama made a proposal to improve this type of payment for many borrowers sooner than the current program will do under an initiative called Pay As You Earn. The current program caps monthly payments at 15 percent of

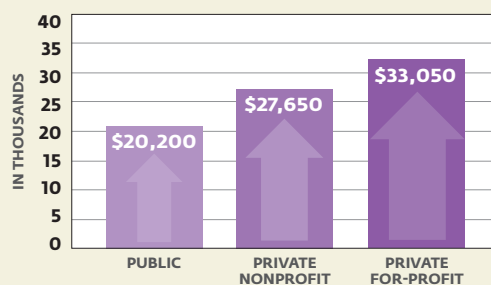
## Student debt rising

The average debt levels for graduating seniors with loans rose almost 82 percent from 1996 to 2008, based on data from the National Postsecondary Student Aid Study, conducted by the Department of Education every four years. Students at private for-profit colleges borrowed the most in 2008.

Average debt over time



Average debt for graduating seniors



Source: The Project on Student Debt, The Institute for College Access & Success, 2010



adjusted gross income and forgives remaining loan balances after 25 years. Pay As You Earn would cap monthly payments at 10 percent of adjusted gross income for some borrowers and forgive remaining loan balances after 20 years, but they might have to pay taxes on the discharged debt. The Department of Education says the new rules would apply to borrowers who took out their first federal loan in 2008 or later, but borrowers must also take out a new loan in 2012 or later to be eligible.

**3 Explore options if you can't afford payments.** For federal loans, you can request a deferment or forbearance. Under a deferment you may be permitted to stop making payments temporarily if you meet certain requirements. Under forbearance you may be allowed to stop making payments temporarily, make smaller payments, or extend the time for making payments if you don't qualify for a deferment. Forbearance is for a maximum of three years at the discretion of the lender, and you must reapply each year. "This is a last resort before default or for short-term financial problems," Kantrowitz says.

Most private loans don't offer deferment, and forbearance terms are limited. Quarterly fees may also apply, and interest accrues during the forbearance.

Don't reduce or skip payments without permission or you might be reported delinquent or in default. National credit bureaus could be notified of your default, which would adversely affect your credit score and also prevent you from qualifying for additional federal student aid.

**4 Consider jobs or volunteer programs that qualify for deferment or forgiveness.** Certain public-service and nonprofit-sector careers, such as teaching, police and fire services, working in public-interest law or public health, or joining the military, may qualify you for cancellation of federal loans. Generally, if you make 120 on-time payments, you might be eligible to have the outstanding loan balance (principal and interest) forgiven, and you could be exempt from taxation on the discharged amount.

You can find more information on the Department of Education's Public Service Loan Forgiveness page on its financial-aid website. Go to *studentaid*.



## To dig yourself out of debt, know your repayment options.

ed.gov, click on "Repay Your Loans," then click on "Public Service Loan Forgiveness." Not all federal loans are eligible.

**5 Consider loan consolidation.** You can combine loans into one payment, which is more of a convenience than a cost savings, unless you still have unconsolidated loans that originated before 2006. Students and parents can't combine their loans; only loans taken out by the same borrower can be consolidated.

And private student loans usually can't be consolidated with federal student loans.

**6 Think twice about going back to school to avoid unemployment.** College enrollment increases during recessions as young adults seek additional degrees and others seek retraining. But incurring more student debt might not pay off. See the box below for advice on ways to avoid borrowing.

Erin Button, 23, of Chicago, an administrative assistant at the Public Interest Research Group, is rethinking plans to go to law school after graduating from Cornell University last year with \$78,000 in private and federal loans for her bachelor's degree in anthropology. She gets a repayment benefit of \$200 a month from her nonprofit job and pays \$450 a month in debt service, more than she pays in rent. Button, who earns less than \$25,000 a year, carries five loans with interest rates ranging from 3.8 percent to 6.8 percent and terms of 10 to 30 years. "It's daunting," she says, "but I'm taking it one month at a time."

**7 Contact your lender immediately if you can't pay.** Skipping out on a student loan won't solve the problem. Defaulting will add late fees and collection costs to your outstanding balance. Parents or grandparents who want to help recent graduates should consider helping to pay back loans instead of giving cash.

## How to avoid borrowing

Students about to enter college can minimize expenses by opting for a community college for two years and then transferring to a four-year institution, or attending an in-state public university.

Fill out the Free Application for Federal Student Aid, or FAFSA, as soon as possible after Jan. 1 for each coming academic year to determine your eligibility for need-based assistance, which doesn't need to be repaid. Take advantage of all grant, scholarship, and work-study opportunities.

Choose thrifter meal plans and housing if you can. Don't take out loans to cover such nonessentials as entertainment and room furnishings. Consider working part-time to cover incidentals.

If you must borrow, avoid using private loans except as a last resort, even though their interest rates may be lower than federal loans now. That's because federal loans issued after July 2006 have a fixed rate of 6.8 percent, while most private loans have variable rates often tied to the London Interbank Offered Rate (LIBOR). Home-equity loans, which may be cheaper now, are also riskier because they can cost you your home if you default.

Mark Kantrowitz, publisher of FinAid.org, suggests that students not borrow more than they can earn in their first full year of employment. A higher debt-to-earnings ratio would probably need to be paid off over 20 years rather than 10 years.



# The slacker's guide to a great lawn

Save  
60 hours  
per year

Americans love their lawns, but the work needed to keep them lush? Not so much. Maintaining a sharp mower blade is a must to keep from butchering the grass, but turf experts say other rules can be relaxed—and you'll still have a nice-looking lawn for lazy afternoons.

**Inside** Mowers and tractors 34 • String trimmers 40

## ▶ Let the lawn go brown during dry spells

It's human nature to want to water a browning plant. But in the case of grass, the color change is merely an indication that the plant is entering a natural state of dormancy designed to conserve nutrients. "From an agronomic standpoint, most grasses can easily survive a month without water," says Doug Soldat, turf scientist at the University of Wisconsin-Madison.

If you can't live with brown grass, the time to water is when you leave footprints in the lawn after walking on it. But don't make the mistake of giving it a light daily watering during dry spells; that will encourage a shallow root system that does more harm than good. Instead, give the lawn a nice long soak, say, 30 minutes' worth (or enough to fill a tuna can), at which point it should be good for another month.

How do you know when your lawn is nearing the line between dormancy and death? "When the lawn turns from tan-brown to straw-colored, that's a sign it probably only has a few days left unless you water it or it rains," says A. Martin Petrovic, turf-grass professor at Cornell University.

**Hours saved annually: up to 12**

## Fertilize less frequently

Fertilizer companies recommend as many as five applications a year—they're in the business of selling the stuff. But many lawns can thrive with no more than two annual applications. Memorial Day and Labor Day are the ideal times (a bit earlier in the Deep South). If you fertilize only once, do it in September using fall fertilizer. Most

high-quality products contain slow-release nitrogen, which promotes growth in the spring. "Manufacturers have made it pretty mistakeproof," says Frank Rossi, a turf expert at Cornell University and private consultant whose clients include the New York Yankees and Green Bay Packers. "If you buy a product that says 'lawn fertilizer,' chances are it will have the right mix of ingredients."

**Hours saved annually: up to 8**







## Let the grass grow a bit longer

You probably know that cutting grass too short can compromise root development. But the long-held rule that you should never remove more than one third of the blade's total height has come under scrutiny. "It was inspired by research conducted in the 1950s by scientists at the U.S. Department of Agriculture who were evaluating Kentucky bluegrass as a forage grass," Rossi says. "If you're feeding cows, the one-third rule will give you the most rapid leaf production. But if your goal is a good-looking lawn, we're

now saying it's OK to take more off." Most domestic grasses can thrive with 50 percent or more of the blade removed.

So you can let the lawn grow to about 5½ inches before mowing. That might result in a shaggier lawn than you're used to, but it will reduce mowing frequency by about 25 percent. Because most mower decks have notches, not inches, setting the right height often involves trial and error. Adjust the deck a notch at a time.

**Hours saved annually: up to 10**

## Live with certain weeds and pests

You might not love the look of dandelions, but they don't actually harm the lawn, and their penetrating tap roots might even improve the soil structure. But you should probably cut off the heads before they go to seed. Clover, which takes nitrogen from the air and feeds it to the soil, also has benefits. Things such as moss and creeping Charlie should be left alone because they thrive in moist, shady areas where grass is unlikely to grow anyway.

Other lawn problems are worth trying to eliminate. Crabgrass, for example, usually dies off at the first frost, promoting soil erosion. You might try

corn-gluten meal, an organic alternative to chemical herbicides. Grubs, small beetle larvae that live in the soil and feed on grass roots, can devastate a lawn, so it's worth consulting with a professional about preventive measures, especially if you've had problems in the past. And remember that thick turf is always the best defense against lawn problems. So seed bare spots to help build up turf.

**Hours saved annually: up to 5**



## Mulch, don't bag

As interest in eco-friendly lawns continues to grow, the lawn-mower bag is becoming less necessary. "Ninety-nine percent of the time you're better off mulching," says Rob Golembiewski, turf-grass specialist at Oregon State University. He's referring to the process of discharging finely cut clippings back onto the turf instead of bagging them. In addition to saving time, that returns nutrients to the soil, reducing your lawn's fertilizer needs by roughly 33 percent.

That will help limit your fertilizer applications to once or twice a year.

One of the few times you need to bag clippings is when the lawn has gotten very long, say, after an extended rainy spell or a long vacation. If that happens, consider composting the clippings. You should also bag clippings during a lawn-disease outbreak, in which case they might need to be taken to the landfill instead of being added to your compost pile.

**Hours saved annually: up to 15**

## Give low-maintenance grasses a look

Instead of grabbing whatever seed mix is on sale at the local garden center, consider one of the newer slow-growth, drought-resistant species. Fine fescues, including creeping red, chewings, and hard, all qualify as low-maintenance. "They provide excellent curb appeal, with about 50 to 75 percent less care than a 'Yankee Stadium' lawn," Rossi says. But fine fescues don't tolerate traffic well, so if your lawn doubles as a Wiffle Ball field, consider tall fescue. It does better underfoot but is susceptible to damage from ice cover. Just remember that slow-growth fescues will take a bit longer to get established, so you'll need some patience.

You'll also find plenty of shade-resistant options, though trying to establish turf under the thick foliage of a maple or other shade tree can be a waste of time. "As much I love grass, it doesn't need to be in every situation," Golembiewski says. "It's OK to convert some parts of the lawn to gravel or perennial beds."

**Hours saved annually: 15 or more**

### SURVEY SAYS

## Mow the lawn or go to the dentist?

We asked more than 1,000 adults nationwide how lawn care compares with other chores. More men said they're primarily responsible for mowing the lawn than women (78 percent, compared with 39 percent, respectively), but the sexes are united in their aversion to the task. In fact, just 7 percent of respondents told us they prefer working on the lawn to other chores and activities. Extra lawn-care jobs they dislike the most are trimming and edging (25 percent dislike), raking grass clippings (23 percent), and cleaning the mower (13 percent).

## So what would folks rather do than maintain their lawn?

**Cook 62%\***  
**Grocery shop 49%**  
**Do laundry 41%**  
**Go to work 38%**  
**Clean the house 38%**  
**Visit the in-laws 33%**  
**See the dentist 17%**

Source: Consumer Reports National Research Center.  
 \*Respondents could choose multiple options, so the totals don't add up to 100.





**WALKING THE LINE** Our testers put more than 100 models through their paces to find those that cut mowing down to size.

# Mowers & tractors

More than 40 top picks make this year's cut

**W**ANT A sensational lawn without the sweat? This year's options include two pricey new tractors that coddle you with carlike comforts. But our latest tests of 116 tractors, mowers, and riders confirm that you can make mowing less laborious without the sticker shock.

John Deere's X310, \$4,000, and Cub Cadet's LGTX1050, \$2,700, are part of a new breed of lawn tractors with power steering and cushy seats. Smooth mulching and bagging helped both score well in our tests, though a poor showing in our brand-reliability surveys kept the capable Cub Cadet off our list of winners.

A better value: Husqvarna's new YTH21K46, \$1,600. It's one of several CR Best Buys that mowed comparably for far less. A 46-inch deck speeds mowing over

narrower models without requiring three blades, which compromise cut quality.

We also found some bargains among the self-propelled gas mowers that most people buy. The best Honda and Toro models are now priced similarly and include Honda's new HRR216VKA, \$400. But Toro has the edge when it comes to features; its Recycler 20333 costs the same but adds a blade-brake clutch that stops the blade rather than the engine if you step away to clear a rock or branch from its path.

Overhead-valve engines that start and run more efficiently are also part of the picture as mowers meet tougher new emissions rules. And if you want faster, wider mowing without buying a tractor, you have two new choices. (See page 38.) But weeks of tests show that paying a little more often buys a lot more machine.

**Value vs. cheap.** Craftsman's 37044, \$350, is our lowest-priced pick among multispeed mowers, which can go from a crawl for long or thick grass to a brisk walk for the lighter stuff. It includes electric starting. Two new single-speed Toro models

## ■ CLOSE-UP

### You think you have a lot to mow?

Call us obsessed. Even before we buy our first mower or tractor, we're at our Fort Myers, Fla., test site seeding and prepping our turf. Then come six sweaty weeks of mowing and, while on our hands and knees, judgments on cut quality. We even weigh clippings to see how much each bag holds. The total: 3,685 pounds.



Scan for video.



cost even less without giving up cutting performance. But unimpressive mowing put Walmart's self-propelled Brute BTX-PV226750HW, \$290, and BTPD22625, \$240, last in their categories.

**Some assembly required.** Murray's new 11A-A23K, \$195, is one of three CR Best Buys among gas push mowers. But we were less impressed with three lower-priced Murrrays in that group. What's more, you'll have to assemble most of the parts on the Murray M20300 and Weed Eater 961120115 push models and remove the wheels whenever you change the cutting height. The low-scoring Murrrays and the Brute BTPD22625 also began rusting beneath the deck after routine cleaning.

**When more buys less.** John Deere's new D100 tractor, \$1,500, might seem like a deal at the store. But its jerky gear drive can't match the smooth, infinitely variable drive systems on our top picks, including Craftsman's 28885, just \$1,300.

## How to choose

A self-propelled gas mower suits most lawns, especially those with hills. Consider a gas or electric push mower for flatter lawns smaller than a quarter-acre. Have a half-acre or more? You'll probably prefer a riding machine. Here's what else to think about before you buy:

**Consider your mowing.** Most mowers come ready to mulch, bag, or side-discharge clippings. But mulching or bagging with a riding machine usually requires a kit that costs \$50 to \$500. Adding a mulch kit to the Ariens Zoom 42" and Toro TimeCutter SS4235 took roughly an hour.

**Check features and controls.** Most tractors and riders let you speed up or slow down with a convenient pedal instead of a lever. Among self-propelled mowers, Toro's Personal Pace system lets you vary speed simply by pushing the handlebar, and Honda's Smart Drive puts two tabs beneath your thumbs. Both beat the awkward controls on the Troy-Bilt TB-330XP and TB-350XP and Snapper SPXV22725.

**Think twice about zero-turn riders.** Rear-steering wheels give zero-turn-radius riders their tight turns but make them difficult to control on steep slopes. Two exceptions: The 46-inch Cub Cadet Z Force S 46 17AF5BHH and 42-inch RZT-S 17WF2BDT, which have steering wheels instead of levers and steerable front wheels, rather than casters. But as with Cub Cadet's tractors, a relatively high repair rate in our surveys kept its riders off our list of picks.

## Features that count: Gas and electric mowers



Blade-brake clutch



Premium engine



One-lever height adjustment



Electric starting



Washout port

**Easy starting.** Most need no priming or choking. Exceptions are Husqvarna (A19, A25), Troy-Bilt (A23, C9), Toro (B2), Yard-Man (B3), Cub Cadet (B4, B5, C1), Craftsman (B9), Brute (B13), Murray (C4, C16, C17, C19), Yard Machines (C8, C14), Bolens (C13, C15), Weed Eater (C18).

**Blade-brake clutch.** Stops only the blade when the handle is released, eliminating the need to restart the engine when clearing debris or emptying the bag. On Honda (A3), Toro (A5), Craftsman (A11), and Lawn-Boy (B8).

**Premium engine.** These have overhead valves for added efficiency. On all self-propelled models except Toro (A5, A6), Craftsman (A8, A16, B6, B11), Brute (A15, A28, B13), Troy-Bilt (A24, B10), Snapper (A26, A27). Push models have side-valve engines except for Cub Cadet (C1), Husqvarna (C2), Troy-Bilt (C3, C9), Murray (C4), Lawn Boy (C5), Craftsman (C6, C10), Yard Machines (C11).

**One-lever height adjustment.** Raises and lowers all four wheels at once. On Craftsman (A7, A11, A16), Troy-Bilt (A9, A10, A18, A21), Snapper (A14, A27), Brute (A15), Husqvarna (A20), Yard-Man (B3), Cub Cadet (B4, B5, C1), Lehr (B12), Black & Decker (D1-D3, D5, E1, E2), Worx (D6, D7, D11), Remington (D9, E3), Homelite (D10, E4), Earthwise (D12, E5), Neuton (D13).

**Rear-wheel drive.** Adds traction over front-drive uphill and when bagging. On all self-propelled mowers but Craftsman (A8, B6, B9), Husqvarna (A13, A17, A19), Troy-Bilt (A23, A24, B10), Snapper (A26), Brute (A28, B13), Toro (B1, B2).

**Electric starting.** A battery eliminates pull-starting. On Craftsman (A8), Snapper (A14), Brute (A15), Yard-Man (B3), Cub Cadet (B5), Lawn-Boy (B7).

**Same-size wheels.** Makes tipping back for U-turns easier than high rear wheels. High-wheel models include Craftsman (A8, A11, A16, B6, C6, C7, C10), Troy-Bilt (A10, A21, A23, A24, C9), Husqvarna (A13, A17, A19, C2), Snapper (A26), Brute (A28), Toro (B2), Lehr (B12), Yard Machines (C11), Murray (C12, C17), Bolens (C13), Homelite (D10), Neuton (D13).

**Washout port.** Accepts a hose atop the deck for cleaning built-up clippings beneath. On Toro (A2, A5, A6, B1, B2), Craftsman (A8, A11, A16, B6, B11, C7), Troy-Bilt (A9, A10, A18, A21, A23, A24, B10), Snapper (A14, A26, A27), Brute (A15, A28), Husqvarna (A19, A20, A22, A25).



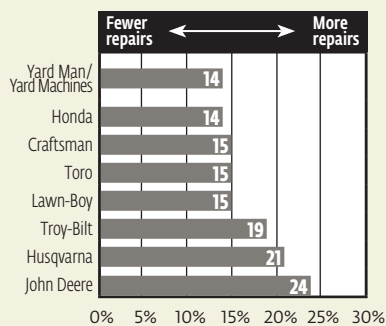
A4 Honda

A5 Toro

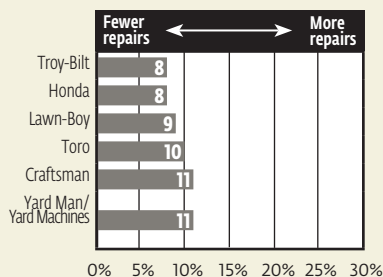
## Most and least reliable

John Deere, Husqvarna, and Troy-Bilt were the most repair-prone brands among self-propelled mowers. That's what we found when we asked readers who bought 9,008 push and 31,371 self-propelled mowers from 2007 through the first half of 2011 about their experiences. The graphs below show the percentage of models from each brand that were repaired or had a serious problem. Differences of fewer than 4 points aren't meaningful, and data are adjusted to eliminate differences linked to mower age and use. Models within a brand may vary, and design and manufacturing changes may affect future reliability. Still, choosing a brand with a good repair history can improve your odds of getting a reliable model. Note that John Deere self-propelled mowers are being phased out, which is why they aren't in our test Ratings.

### SELF-PROPELLED MOWERS



### PUSH-TYPE MOWERS



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

# Ratings Lawn mowers

All tested models In performance order, within types.

Recommendation	Rank	Brand & model <small>Similar models, in small type, are comparable to tested model.</small>	Price	Specs		Overall score	Test results				
				Deck size (in.)	Engine cc/volts/amps		Mulching	Bagging	Side-discharge	Handling	Ease of use
					0 100						
					P   F   G   V   E						

## A GAS SELF-PROPELLED, MULTI-SPEED Best for most lawns; these blend ease and performance.

✓	1	Honda HRX217VKA	\$600	21	190cc	83	•	•	•	•	•
✓	2	Toro 20381 20382	550	21	159	82	•	•	•	•	•
✓	3	Honda HRR216VYA	500	21	160	78	•	•	•	•	•
✓	4	Honda HRR216VKA	400	21	160	76	•	•	•	•	•
✓	5	Toro Recycler 20333 20334	400	22	190	75	•	•	•	•	•
✓	6	Toro Recycler 20332	360	22	190	73	•	•	•	•	•
✓	7	Craftsman 37108	400	21	175	67	•	•	•	•	•
✓	8	Craftsman 37044	350	22	190	65	•	•	•	•	•
	9	Troy-Bilt TB-330XP 12AKC39	350	21	175	63	•	•	•	•	•
	10	Troy-Bilt TB-350XP 12AKD39	370	21	175	62	•	•	•	•	•
	11	Craftsman 37095	500	22	190	62	•	•	•	•	•
	12	Lawn-Boy 10607	300	20	149	61	•	•	•	•	•
	13	Husqvarna 38045	320	22	149	61	•	•	•	•	•
	14	Snapper NXT22875E NXT22875EE	470	22	190	61	•	•	•	•	•
	15	Brute BTXPV22700E	350	22	190	60	•	•	•	•	•
	16	Craftsman 37092 37093	380	22	190	60	•	•	•	•	•
	17	Husqvarna XT721F XT721FE	330	21	173	59	•	•	•	•	•
	18	Troy-Bilt 12AKC39B	350	21	175	59	•	•	•	•	•
	19	Husqvarna HU700F	330	22	160	59	•	•	•	•	•
	20	Husqvarna 38096	350	22	149	58	•	•	•	•	•
	21	Troy-Bilt 12AKD39B	370	21	175	58	•	•	•	•	•
	22	Husqvarna HU775L	350	22	175	58	•	•	•	•	•
	23	Troy-Bilt 12AVB29Q	330	21	161	57	•	•	•	•	•
	24	Troy-Bilt TB-230 12AVB25U	300	21	190	57	•	•	•	•	•
	25	Husqvarna HD700L	370	22	161	57	•	•	•	•	•
	26	Snapper SPV22725HW	310	22	190	50	•	•	•	•	•
	27	Snapper SPXV22725	420	22	190	48	•	•	•	•	•
	28	Brute BTXPV226750HW	290	22	190	48	•	•	•	•	•

## B GAS SELF-PROPELLED, SINGLE-SPEED Suitable for most lawns, but they sacrifice flexibility.

✓	1	Toro 20370	290	22	149cc	66	•	•	•	•	•
✓	2	Toro 20371	300	22	149	65	•	•	•	•	•
✓	3	Yard-Man 12A-18M7 38914 (Sears)	250	19	173	60	•	•	•	•	•
✓	4	Cub Cadet 12A-18MC 12A-18M7	300	19	173	59	•	•	•	•	•
✓	5	Cub Cadet 12A-E18M 12A-E18JA	360	19	173	56	•	•	•	•	•
	6	Craftsman 37043 37041	300	22	190	53	•	•	•	•	•
	7	Lawn-Boy 10606	330	20	149	53	•	•	•	•	•
	8	Lawn-Boy 10605 10604	320	20	149	52	•	•	•	•	•
	9	Craftsman 37040	260	22	140	51	•	•	•	•	•
	10	Troy-Bilt TB-210 12A-A255	280	21	190	49	•	•	•	•	•
	11	Craftsman 37091	330	22	190	48	•	•	•	•	•
	12	Lehr LM139SP	350	20	139	39	•	•	•	•	•
	13	Brute BTPD22625	240	22	190	39	•	•	•	•	•



● Excellent ● Very good ○ Good ● Fair ● Poor

	Brand & model	Price	Specs	Overall score	Test results					
Recommendation	Rank	Similar models, in small type, are comparable to tested model.	Deck size (in.)	Engine cc/volts/amps	0100 P   F   G   V   E	Mulching	Bagging	Side-discharge	Handling	Ease of use

## C GAS PUSH Fine for smaller, flatter lawns and for trimming larger ones.

✓	1	Cub Cadet 11A-18MC 11A-18M9, Yard-Man 11A-18M9	\$260	19	173cc	62	○	●	●	○
✓	2	Husqvarna 6021P 5521P, 7021P	250	21	149	59	●	○	○	●
✓	3	Troy-Bilt TB-110 11A-A23N	200	21	140	59	○	○	○	●
✓	4	Murray 11A-A23K	195	21	140	58	○	○	○	●
✓	5	Lawn-Boy 10603	240	20	149	58	●	○	○	○
✓	6	Craftsman 37010	200	21	140	58	○	③	○	○
✓	7	Craftsman 37037	250	21	190	57	●	○	○	○
✓	8	Yard Machines 407896	170	21	158	57	○	○	①	○
✓	9	Troy-Bilt 11A-B29Q	240	21	161	56	●	○	○	○
	10	Craftsman 37030	200	21	140	54	○	○	①	○
	11	Yard Machines 11A-B13L	200	21	140	53	○	○	①	○
	12	Murray 11A-B24Z	210	21	190	52	○	○	○	○
	13	Bolens 11A-B04E	185	21	158	51	○	③	○	●
	14	Yard Machines 11A-A44E	150	21	158	50	④	④	○	●
	15	Bolens 11A-A40J	160	21	148	46	④	④	○	●
	16	Murray M22450	150	22	148	44	●	③	○	●
	17	Murray M22500	170	22	158	40	●	③	○	●
	18	Weed Eater 961120115 961120116	140	20	148	37	④	④	○	●
	19	Murray M20300	130	20	148	37	④	④	○	●

## D ELECTRIC BATTERY Best for lawns small enough to mow within the 30- to 45-minute run time.

✓	1	Black & Decker SPCM1936 ⑤	450	19	36V	61	●	○	●	○
✓	2	Black & Decker CM1936 CM1936ZF2	400	19	36	59	●	○	○	○
✓	3	Black & Decker CMM1200	400	19	24	58	●	○	○	○
✓	4	Toro 20360	350	20	36	56	●	●	①	○
	5	Black & Decker CM1836	350	18	36	53	○	○	○	○
	6	Worx WG788	430	19	36	52	●	○	○	○
	7	Worx WG789 ⑤	500	19	36	51	●	○	○	○
	8	Worx WG783	200	14	24	50	●	●	①	○
	9	Remington 18A-212B	320	19	24	49	○	●	○	○
	10	Homelite UT13126	300	20	36	48	●	○	○	○
	11	Worx WG 780	390	19	24	46	●	○	○	○
	12	Earthwise 60120	300	20	24	44	●	●	○	○
	13	Neuton CE 6.4	500	19	36	43	●	●	①	○

## E ELECTRIC CORDED Best for smaller, more open lawns where the cord isn't an issue.

✓	1	Black & Decker MM875	240	19	12A	56	●	●	○	○
	2	Black & Decker MM1800	200	18	12	49	○	○	○	○
	3	Remington 18A-212A	210	19	12	47	○	●	○	○
	4	Homelite UT13124	200	20	12	43	●	●	○	○
	5	Earthwise 50120	230	20	12	39	●	●	○	○

① Mulching and bagging only. ② Propane-powered. ③ Mulching and side-discharging only. ④ Side-discharging only. ⑤ Self-propelled electric.



D1 Black & Decker

E1 Black & Decker

## Overview

Our top picks come from reliable brands (where data are available) and usually mulch, bag, and side-discharge clippings. Among them, we focus below on mowers with specific attributes, value, or both.

- ✓ **CR Best Buy** These blend value and performance, and are all recommended.
- ✓ **Recommended** These offer top performance and often specific strengths.

## TOP SELF-PROPELLED MOWERS

- A2 Toro \$550
- A4 Honda \$400 **CR Best Buy**
- A5 Toro \$400 **CR Best Buy**

All three perform comparably to the top-scoring Honda for less money. **A2** combines an efficient, overhead-valve engine with superb mowing in all three modes. Between **A4** and **A5**, choose the Honda for its overhead-valve engine, the Toro for its blade-brake clutch.

## ALMOST AS GOOD FOR LESS

- A8 Craftsman \$350
- B1 Toro \$290 **CR Best Buy**
- B3 Yard-Man \$250

**A8** is our lowest-priced pick among multi-speed, self-propelled mowers and has electric starting. Among single-speed models, choose **B1** for its superb mulching, the lower-priced **B3** if stellar bagging is less important.

## FOR SMALLER OR FLATTER LAWNS

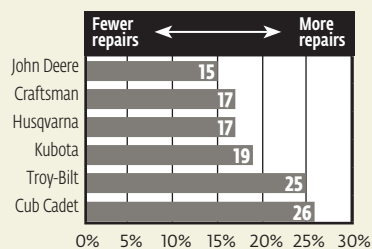
- C1 Cub Cadet \$260
- C4 Murray \$195 **CR Best Buy**
- D1 Black & Decker \$450
- D3 Black & Decker \$400
- E1 Black & Decker \$240

Both gas push mowers have overhead-valve engines. Between them, **C1** offers notably better bagging and side-discharging, and **C4** is among the lowest-priced top performers. Between the two cordless electrics, paying more for **D1** buys motor-driven wheels, smoother side-discharging, and easier handling. Want the push-button starts and easy maintenance of an electric mower for less? **E1** delivers impressive mulching and bagging, though those savings include the added hassle of a power cord.

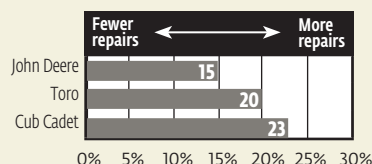
## Most and least reliable

Troy-Bilt was among the most repair-prone brands of tractors, Cub Cadet among tractors and zero-turn-radius riding mowers. That's what we found when we asked readers who bought 17,701 lawn tractors and 2,223 zero-turn-radius riders from 2007 through the first half of 2011 about their experiences. The graphs below show the percentage of models from each brand that were repaired or had a serious problem. Differences of fewer than 6 points aren't meaningful, and data are adjusted to eliminate differences linked to mower age and use. Models within a brand may vary, and design and manufacturing changes may affect future reliability. Still, choosing a brand with a good repair history can improve your odds of getting a reliable model.

### LAWN TRACTORS



### ZERO-TURN-RADIUS RIDERS



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

## Features that count: Tractors and riders



High-back seat



Visible fuel gauge



Infinite drive speeds

**High-back seat.** Adds back support, welcome when mowing large properties. On all tested tractors except John Deere (A5, A18), Cub Cadet (A8), Craftsman (A11, A19), Troy-Bilt (A16), and Bolens (A20), and on all zero-turn-radius riders except Husqvarna (C6) and John Deere (C8).

**Infinite drive speeds.** Let you vary speed smoothly without the jerks and shifting associated with gear-drive systems. On all tractors and riders except John Deere (A18), Craftsman (A19), Bolens (A20).

**Electric power takeoff.** Engages the blades with the flick of a switch instead of a mechanical lever. On all tractors and riding machines except John Deere (A5, A18), Cub Cadet (A6, A8), Husqvarna (A7), Craftsman (A10, A11, A13, A19), Ariens (A14), Troy-Bilt (A16, A17), Bolens (A20).

**Easy mode changes.** Most models require a blade change to mulch, some to bag. Snapper (A2), John Deere (A3, A18), Toro (C4), and Troy-Bilt (C12) do not. The Toro (C4) mulches without changing blades, but adding the mulch plate is a hassle.

**Visible fuel gauge.** Lets you check fuel levels from the seat. On Snapper (A2, A12), John Deere (A5, A18, B2, C8), Cub Cadet (A6, A8, B1, C2), Craftsman (A10, B3, B4, C3), Husqvarna (B5, C6), Toro (C4), Ariens (C11).

**Washout port.** Accepts a hose atop the deck for cleaning built-up clippings beneath. On all tractors and riders except John Deere (A4, A9, C8), Craftsman (A10, A19), Troy-Bilt (A16), Bolens (A20), Husqvarna (B5), Snapper (C7).

## Lawn-tractor alternatives

We tested two 30-inch mowers that are sized and priced between walk-behind models and tractors. But unless storage is tight, you might want to spend another \$300 or so for a wider-cutting tractor.

Toro's TimeMaster 20199 costs \$1,000 and looks like a mower on steroids. Two 15-inch blades mulched competently and discharged clippings evenly in our tests. But the best walk-behind mowers did even better and handily beat the TimeMaster's so-so bagging. We also found maneuvering and turning relatively difficult. A handlebar that swings up for storage helps it take less space than a tractor or rider. But you'll still need more than for an ordinary mower.

Troy-Bilt's TB30 R Neighborhood Rider costs the same but lets you sit serenely while the wheels do the work. It's sold at

Lowe's and some dealers. But like other small rear-engine riders we tested, this one delivered mediocre mowing—a reason they aren't among our picks. Other gripes include a jerky gear drive, rather than the smooth hydrostatic drive on most tractors, and an interlock on the discharge chute that must be aligned just right for the engine to start.



Toro TimeMaster 20199



Troy-Bilt TB30 R

## Guide to the Ratings

**Overall score** is mostly mulching, bagging, side-discharging (includes evenness), handling, and ease of use. Changes in scoring mean scores for previously tested models may have changed. Displayed scores rounded; models listed by precise overall score. **Mulching** is how evenly clippings were cut and distributed onto lawn. **Bagging** is evenness and capacity with full bag(s) or clogged chute. **Side discharge** is how evenly clippings were dispersed. **Handling** for self-propelled and push mowers is ease of using drive controls, pushing, pulling, U-turns, other maneuvers; for tractors and riders, ease of drive engagement, braking, steering, turn radius, resistance to front-wheel lift. **Ease of use** for mowers is ease of starting, using blade-stopping controls, changing speeds, adjusting cut height; for tractors and riders, leg room, seat and steering-wheel/lever comfort, ease of blade/brake engagement, cut-height changes, bag removal, mode changes. **Price** is approximate retail for mowers and attachments; attachment prices for tractors and riders are from manufacturers.



A5 John Deere

## Overview

Our top picks mulched and bagged impressively and were at least Good at side-discharging. They're also from reliable brands (where data are available), which is why Cub Cadet models didn't make our picks. Among top picks, we focus below on models with specific attributes or value.

- ✓ **CR Best Buy** These blend value and performance, and are all recommended.
- ✓ **Recommended** These offer top performance and often specific strengths.

### TOP-VALUE TRACTORS

- A5 John Deere** \$1,700 **CR Best Buy**
- A7 Husqvarna** \$1,600 **CR Best Buy**
- A10 Craftsman** \$1,700 **CR Best Buy**
- A11 Craftsman** \$1,300 **CR Best Buy**

All perform comparably to our top-scoring picks for less and include infinitely variable, foot-pedal drives. The 42-inch **A5** and **A10** take the least storage space; between them, the Deere offers a wide network of servicing dealers, and the Craftsman adds a high-back seat and tighter turning. Among 46-inch models, choose **A7** for its high-back seat and comfortable steering wheel, **A11** for its low price. Also consider **A3** for its power steering, **A4** for its tight, all-wheel steering.

### IF YOU WANT A WIDER DECK

- B2 John Deere** \$2,000 **CR Best Buy**
- B3 Craftsman** \$3,000
- B4 Craftsman** \$2,100

All have wider, three-blade decks that trade some cut quality for time savings. **B2** has the smoothest mulching; the others offer better bagging, tighter turning, and 54-inch decks. Paying more for **B3** buys a faster ground speed that can get you back to the garage or shed more quickly when mowing is done.

### ZERO-TURN-RADIUS RIDERS

- C3 Craftsman** \$2,300 **CR Best Buy**
- C6 Husqvarna** \$2,600

These rear-steering machines have front casters that swivel freely and offer less control than tractors on slopes of 10 to 15 degrees. **C3** costs less than most and includes a high-back seat; **C6** offers wider mowing. The top Cub Cadets have a steering wheel instead of levers and steerable front wheels for better control on hills, but the brand has been repair-prone in our surveys.

# Ratings Tractors and riders

All tested models In performance order, within types.

- Excellent
- Very good
- Good
- Fair
- Poor

Recommendation	Rank	Brand & model Similar models, in small type, are comparable to tested model.	Price		Specs		Overall score	Test results				
			Machine	Bag/mulch kit	Deck size (in.)	Engine power (hp)		Side-discharge	Mulching	Bagging	Handling	Ease of use

## A LAWN TRACTORS Best for most larger lawns; models with tight turning are footnoted.

1	✓	Cub Cadet GT 2042	\$3,500	\$570/\$75	42	20	77	●	●	●	●	●
2	✓	Snapper NXT2346	2,800	430/80	46	23	76	●	●	●	●	●
3	✓	John Deere X310	4,000	520/90	42	19	75	●	●	●	●	●
4	✓	John Deere X304	3,600	520/90	42	17	75	●	●	●	●	●
5	✓	John Deere D110 D120, D130	1,700	340/30	42	20	74	●	●	●	●	●
6		Cub Cadet LTX1045 13RX91AT LTX1045 13WX91AT	1,700	380/50	46	20	74	●	●	○	●	●
7	✓	Husqvarna YTH21K46	1,600	370/50	46	21	73	●	●	●	●	●
8		Cub Cadet LTX1040 13RX90AR LTX1040 13WX90AS	1,500	550/50	42	19	73	●	●	●	●	●
9	✓	John Deere X300	3,000	520/90	42	17	73	●	●	●	●	●
10	✓	Craftsman 28856	1,700	310/53	42	24	72	●	●	●	●	●
11	✓	Craftsman 28885	1,300	410/53	46	21	69	●	●	●	●	○
12	✓	Snapper SPX 2246	2,000	430/80	46	22	68	●	●	●	●	●
13		Craftsman 28852	1,550	350/53	46	21	66	●	●	●	●	●
14		Ariens A20H46	1,300	310/50	46	20	65	●	●	●	●	●
15		Craftsman 25005	4,000	500/80	46	22	65	●	●	●	●	●
16		Troy-Bilt Bronco 13WX78KS	1,250	300/50	42	20	64	●	●	●	●	○
17		Troy-Bilt Horse 13AX79KT	1,400	400/50	46	22	62	●	●	○	●	○
18		John Deere D100	1,500	420/90	42	18	62	●	●	○	●	●
19		Craftsman 28881	1,050	310/53	42	18	56	●	●	●	●	○
20		Bolens 13W1762F 317739	950	270/35	38	14	46	○	○	○	●	○

## B LAWN TRACTORS (WIDE DECK) These offer wider cuts; models with tight turning are footnoted.

1	✓	Cub Cadet LGTX1050 13WS92AP	2,700	550/50	50	25	73	○	●	●	●	●
2	✓	John Deere D140 D150, D160	2,000	350/35	48	22	69	○	●	●	●	●
3	✓	Craftsman 28861	3,000	410/53	54	26	68	○	○	●	●	●
4	✓	Craftsman 28858	2,100	410/53	54	26	68	○	○	●	●	●
5		Husqvarna YTH2348 YTH23V48	1,800	370/50	48	23	64	○	○	●	●	●
6		Cub Cadet LT1050 13RQ11CP LTX1050 13WF91AP, LTX1050 13WQ91AP	2,000	400/75	50	25	64	○	●	●	●	●

## C ZERO-TURN-RADIUS RIDERS All turn tightly, but most can be hard to control on hills.

1	✓	Cub Cadet Z Force S 46 17AF5BHH	3,700	400/50	46	20	76	●	●	●	●	●
2		Cub Cadet RZT-S 17WF2BDT	3,000	400/50	42	22	75	●	●	○	●	●
3	✓	Craftsman 25001	2,300	200/40	42	24	72	●	●	●	●	●
4	✓	Toro TimeCutter SS4235 74627 SS4235 74624	2,600	500/140	42	20	71	●	●	●	●	●
5		Cub Cadet RZT42 17WF2ACS	2,500	400/75	42	22	71	●	●	●	●	●
6	✓	Husqvarna RZ4623	2,600	430/50	46	23	70	●	●	●	●	●
7	✓	Snapper 150Z	2,600	460/130	42	20	67	●	●	●	●	●
8	✓	John Deere Z225	2,900	420/90	42	19	66	●	●	○	○	●
9		Cub Cadet Z Force S 48 17AI5BHB 48 17AF5BHB	4,200	350/200	48	22	64	●	○	●	●	●
10		Cub Cadet RZT 50 17AI2ACP 50 17WF2ACP	3,000	500/50	50	22	63	○	●	●	●	●
11		Ariens Zoom 42"	2,500	400/50	42	20	63	○	●	○	●	●
12		Troy-Bilt Colt 17AE2ACG 17WF2ACS	2,300	500/50	42	19	56	○	○	●	○	○

① Tighter turning than most lawn tractors. ② Mulching and side-discharging only.



# String trimmers

25 top picks have the edge

**EASIER STARTING** and more capable cutting: Our latest tests of gas and electric trimmers yielded more than two dozen that have it all, and prices start at just \$30.

**Best for most trimming.** Gas models offer power and mobility. Craftsman's 79102, \$100, and 79120, \$160, ease starting with a choke that turns itself off. Those two and the Troy-Bilt TB80 EC, \$130, also let you skip pull-starting with a \$10 adapter that uses a cordless drill to turn the engine. Craftsman's 79120 adds plug-in electric starts.

**Power on the cheap.** Several gas trimmers did almost as well, with less cost and bulk. Homelite's UT32600, \$70, weighs just 9 pounds yet breezed through 2-foot growth. Weed Eater's Featherlite SST25CE, \$90, eliminates the usual choke.

**Solutions for small spaces.** Corded trimmers cost the least but are limited to 100 feet from an outlet. The Homelite UT41110, \$30, trimmed as cleanly as most gas models. Black & Decker's GH1000, \$70, offers better edging but will soon be replaced with a lighter version, the GH1100, after two government safety recalls.

**Battery power at a price.** Cordless trimmers blend mobility with easy starts. Ryobi's RY24201, \$160, has a swiveling head with a wheel for easier edging. But like other cordless models, it can't match gas trimmers or the best corded electrics in tall grass. Run time is about 30 minutes.

## How to choose

**See how it feels.** Straight-shaft trimmers offer longer reach and tend to be better for taller users; curved-shaft models are usually easier to handle. But even shorter testers had to stoop with the corded Weed Eater WE EL-13TNE and WE EL-15TNE, which didn't make our cut.

**Check the head.** The gas Ryobi RY28040 and Homelite UT32650 and UT32600 let you add line without removing the head.

**Play it safe.** Wear safety glasses, long pants, and boots. And use ear protection with models rated Fair or Poor for noise.



## Ratings

Recommended models only From 60 tested.

Recommendation	Rank	Brand & model	Price	Weight (lb.) <sup>[1]</sup>	Engine cc/ amp/volt	Overall score	Test results					
							Trimming	Edging	Tall grass	Handling	Ease of use	Noise

☒ CR Best Buy  
☒ Recommended

● Excellent  
 ○ Very good  
 ○ Good  
 ○ Fair  
 ● Poor

### A GAS-POWERED MODELS These provide mobility and unlimited run time but require upkeep.

<input checked="" type="checkbox"/>	1	Stihl FS 45	\$150	10.5	27 cc	81	●	●	●	●	●	●
<input checked="" type="checkbox"/>	2	Stihl FS 40 C-E	190	11	27	81	●	●	●	●	●	●
<input checked="" type="checkbox"/>	3	Echo SRM-225 <sup>[2]</sup>	220	12	21	80	●	●	●	●	●	●
<input checked="" type="checkbox"/>	4	Stihl FS 56 RC-E <sup>[2]</sup>	240	12.5	27	78	●	●	●	●	●	●
<input checked="" type="checkbox"/>	5	Echo GT-225 <sup>[3]</sup>	160	10	21	77	●	●	●	●	●	●
<input checked="" type="checkbox"/>	6	Husqvarna 128LD <sup>[2]</sup>	200	13.5	28	76	●	●	●	●	○	●
<input checked="" type="checkbox"/>	7	Hitachi CG22EABSLP	180	9.5	22	76	●	●	●	●	●	●
<input checked="" type="checkbox"/>	8	Toro 51954	140	11.5	25	74	●	●	●	●	●	●
<input checked="" type="checkbox"/>	9	Craftsman 79102	100	11.5	25	73	●	●	●	○	○	●
<input checked="" type="checkbox"/>	10	Toro 51974 <sup>[2]</sup>	180	12.5	25	73	●	●	●	●	●	●
<input checked="" type="checkbox"/>	11	Craftsman 79120 <sup>[2]</sup>	160	12.5	27	71	●	●	●	○	●	●
<input checked="" type="checkbox"/>	12	Troy-Bilt TB80 EC <sup>[2]</sup> <sup>[3]</sup>	130	12	27	70	●	●	●	○	○	●
<input checked="" type="checkbox"/>	13	Troy-Bilt TB22 EC <sup>[3]</sup>	100	11	25	70	●	●	●	○	○	●
<input checked="" type="checkbox"/>	14	Ryobi RY28040 <sup>[2]</sup> <sup>[4]</sup>	125	11.5	26	70	●	●	●	○	○	●

### B LIGHT-DUTY GAS MODELS These are more suited for light trimming.

<input checked="" type="checkbox"/>	1	Weed Eater Featherlite SST25CE <sup>[2]</sup> <sup>[3]</sup>	90	10.5	25 cc	69	●	●	●	●	●	●
<input checked="" type="checkbox"/>	2	Homelite UT32650 <sup>[2]</sup>	95	10	26	67	●	●	●	○	○	●
<input checked="" type="checkbox"/>	3	Homelite UT32600	70	9	26	65	●	●	●	○	○	●

### C CORDED ELECTRIC MODELS These provide unlimited run time within range of a power outlet.

<input checked="" type="checkbox"/>	1	Stihl FSE 60	110	8.5	5.3 amp	70	●	●	●	●	●	●
<input checked="" type="checkbox"/>	2	Black & Decker GH1000	70	7.5	7.2	70	●	●	●	●	●	●
<input checked="" type="checkbox"/>	3	Black & Decker GH700	55	7.5	5.2	58	●	○	○	○	○	○
<input checked="" type="checkbox"/>	4	Homelite UT41110	30	7	4	57	●	○	○	○	○	○
<input checked="" type="checkbox"/>	5	Craftsman 74547	50	7.5	5.5	56	●	○	○	○	○	○

### D CORDLESS ELECTRIC MODELS These offer push-button starts and easy upkeep but limited run time.

<input checked="" type="checkbox"/>	1	Ryobi RY24201 <sup>[2]</sup> <sup>[4]</sup>	160	8	24 volt	61	●	●	○	○	○	○
<input checked="" type="checkbox"/>	2	Black & Decker NST1024 <sup>[2]</sup> <sup>[4]</sup>	130	9	24	59	●	●	○	○	○	○
<input checked="" type="checkbox"/>	3	Black & Decker NST2036 <sup>[2]</sup>	200	14.5	36	59	●	○	○	○	○	○

<sup>[1]</sup> Weight is to the nearest half-pound. <sup>[2]</sup> Straight shaft; others are curved. <sup>[3]</sup> Fixed-line head; others are automatic or bump-feed.

<sup>[4]</sup> One line; others have two.

## Reports

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# Lab tests

Ratings, reviews, recommendations

## Big-screen beauties

A trio of new smart phones provide faster processors, bigger screens, and 4G support. Prices are with a two-year contract, including rebates. We'll have full test results soon.



### ► Motorola Droid 4, Verizon, \$200

The fourth-generation **Motorola Droid 4** has significant performance upgrades yet keeps the Droid's sliding keyboard design. The backlit keys are in five well-spaced rows instead of four, easing data entry. Other improvements and features: support for Verizon's ultra-fast 4G LTE data network, a 4-inch high-resolution display, a dual-core 1.2-GHz processor, 1GB of RAM, an 8-megapixel rear-facing camera with 1080p HD video, and a 1.2-megapixel front-facing camera. On the downside, it lacks the **Droid 3's** international roaming ability.

**Bottom line.** Great if you text frequently and want the tactile feedback of a physical keyboard that's well laid out.



### ► Motorola Droid Razr Maxx, Verizon, \$300

This recent Verizon exclusive is a marathon performer thanks to its battery, which enabled the **Droid Razr Maxx** to deliver exceptional talk time—13.25 hours on average and up to 24 hours on a single charge—in our tests. At 5.2 inches x 2.7 inches x 0.4 inches and 5.1 ounces, the Razr Maxx is a tad thicker and heavier than the otherwise identical **Droid Razr**, which has a smaller battery. Both are among the highest-scoring phones in our Ratings and have superb 4.3-inch high-resolution screens that provided excellent keypad readability under most lighting conditions, even in bright light. Both also have 8-megapixel (rear-facing) and 1.2-megapixel (front-facing) cameras.

**Bottom line.** With its phenomenal battery life, the Droid Razr Maxx will give you more time to enjoy its many charms at full throttle.



### ► Samsung Galaxy Note, AT&T, \$300

Samsung's new **Galaxy Note** smart phone has the mother of all cell-phone displays, a 5.3-inch high-definition touch screen. The bountiful real estate and exceptional performance in bright light make the phone a compelling choice for heavy Web users and e-book fans alike. But dialing phone numbers and doing other one-handed operations are difficult on this slab, which is almost half a foot long and a hefty 6.4 ounces. When you're not talking or browsing the Web, you can use the Note's S Pen stylus to jot down notes or sketches in the memo app, which lets you combine all of your pictures, voice recordings, texts, and S Pen scribbles into a single folder for easy sharing. The Galaxy Note has a 1.5-GHz dual-core processor, 1GB of RAM, an 8-megapixel rear-facing camera, and a 1.9-megapixel front-facing camera that's useful for video chats.

**Bottom line.** The Note's size puts a damper on phone functionality, but it may be just the ticket for online addicts and bookworms who want to leave their tablet or e-book reader at home.

# Nice touch: iPad keyboards

If you're an iPad user who would rather not hunt-and-peck on a touch screen, accessory keyboards can be a great convenience. We tested several that are Bluetooth compatible to assess their usefulness.



## Belkin Keyboard Folio F5L090, \$100

Designed for the iPad 2, it has a built-in battery and is rechargeable via USB.

**PROS** The Folio is a good choice if you want an integrated case and a display stand that has an adjustable angle. Its decent-sized keyboard has keys almost as large as those on a laptop or desktop computer and includes a few shortcut buttons.

**CONS** At 1.3 pounds, it's heavy. The fitted case is snug on the iPad 2, so it's hard to put on and remove. And the elaborate folding design can take some getting used to.

## Zagg ZAGGfolio, \$100

This versatile keyboard has a case to protect the tablet and a handy stand. Its integrated battery recharges through a USB connection.

**PROS** The keys are almost as large as those on a typical laptop or desktop, and they have custom tablet controls, including Home and Lock Screen. An international layout button allows quick switching between different keyboard formats, if that's enabled by your iPad. Without the case, the tablet can be used in either horizontal or vertical orientation. With the case, there's a sleep mechanism that kicks in when the lid is closed.

**CONS** The case is a snug fit for both the keyboard and iPad 2.

That makes it hard to extricate them, which you must do to access the keyboard's charging port. With the case, the ZAGGfolio is fairly heavy, at 1.2 pounds.



# Food processors & choppers

A new food processor is at the top of our Ratings, though it costs top dollar and requires lots of counter space. The **A1 Breville**, \$400, chopped circles around the other processors in our tests. It also excelled at slicing, shredding, and grating. The Breville comes with lots of accessories, including an adjustable slicing disc with 24 settings, from paper thin to thick. But weighing in at 19 pounds when empty and standing almost 18 inches high, it's also one of the largest processors we've ever tested.

Looking to make less of a commitment? The **A2 Cuisinart**, \$200, was impressive at most tasks, though chopping was less than stellar. It also has a smaller capacity, 11 cups. **A3 Cuisinart**, \$200, offers similar performance and a slightly larger capacity for the same price as its brand mate. But it has a shorter warranty on the motor.

**A4 KitchenAid**, \$100, excelled at slicing and is relatively quiet. It trades a much smaller, 7-cup capacity for a lower price. Though the capacity is fine for most jobs, cooks who like to prepare large batches of food may want to go bigger. A step up in size and price, **A5 KitchenAid**, \$200, was better at chopping. It also has more accessories, including a dough blade, a mini-bowl for smaller jobs, and a disc organizer. The large-capacity **A6 Magimix**, \$450, has even more accessories, such as midsized and mini-bowls and both juicer and whipping attachments. It was fine at slicing, shredding, and grating, though less impressive than you'd expect at chopping and puréeing, given its price.

For smaller tasks in the kitchen, a food chopper may be the easier appliance to use. The top-rated **B1 Ninja** Master Prep Professional, \$60, is both a chopper and a blender. Interchangeable blades and containers make it easy to switch between functions. The **B2 Cuisinart** holds slightly more, weighs a bit less, and costs less than the Ninja. But it doesn't grate or purée as well.



A1 Breville



B1 Ninja

## Ratings

**Recommended models only** From 47 tested.

☒ CR Best Buy ☒ Recommended

● Excellent ● Very good ○ Good ● Fair ● Poor

Rec.	Rank	Brand & model	Price	Specs	Overall score	Test results						
				Weight (lb.)	Claimed capacity (cups)		Chopping	Slicing	Shredding	Puréeing	Grating	Noise
						0						
						100						
						P   F   G   V   G   E						

### A FOOD PROCESSORS Mini-bowls help when chopping, puréeing, or grating small quantities.

<input checked="" type="checkbox"/>	1	<b>Breville</b> Sous Chef BFP800XL (Sur La Table)	\$400	19	16	72	●	●	●	○	●	●	yes
<input checked="" type="checkbox"/>	2	<b>Cuisinart</b> DLC-2011CHB	200	13	11	69	○	●	●	●	●	●	no
<input checked="" type="checkbox"/>	3	<b>Cuisinart</b> DFP-14BCN	200	14	14	68	○	●	●	●	●	●	no
<input checked="" type="checkbox"/>	4	<b>KitchenAid</b> KFP715[WH]	100	11	7	67	○	●	●	●	○	●	no
<input checked="" type="checkbox"/>	5	<b>KitchenAid</b> KFP750[WH]	200	17	12	65	●	●	●	○	●	●	yes
<input checked="" type="checkbox"/>	6	<b>Magimix</b> Cuisine 5150	450	17	15	64	○	●	●	○	●	●	yes
<input checked="" type="checkbox"/>	7	<b>Cuisinart</b> Pro Custom II DLC-8S	160	13	11	62	○	○	●	●	○	●	no

### B CHOPPERS These are for small jobs and lack the ability to slice or shred food.

<input checked="" type="checkbox"/>	1	<b>Ninja</b> Master Prep Professional QB1004	60	3	2, 5	70	●	NA	NA	●	●	○
<input checked="" type="checkbox"/>	2	<b>Cuisinart</b> Mini Prep Plus DLC-2A	40	2	3	63	●	NA	NA	○	●	○





### ▶ RocketFish iPad2 Keyboard, \$100

The RocketFish has an integrated case and stand that can close like a laptop. It also has a built-in battery that is rechargeable by USB cable.

**PROS** The keys are almost as large as those on a typical laptop or desktop keyboard, with tablet-specific buttons and shortcuts. The tablet can easily be taken out of the stand, and it has a built-in sleep mechanism when it's closed.

**CONS** At 2.3 pounds, this is the heaviest keyboard we tested, weighing more than an iPad. The stand can be used only in a horizontal orientation, and it covers the iPad's rear camera.

### ▶ Apple Wireless Keyboard, \$70

This device can be used with iPads or Mac computers and requires 2 AA batteries.

**PROS** The keyboard is small and light at 0.7 pounds, which makes it good for traveling. Its keys are full size, like those you would find on a typical laptop or desktop keyboard. It includes shortcut buttons for brightness and media playback.

**CONS** The keyboard buttons aren't customized for iPad use, so some (such as the Launchpad and Dashboard buttons) serve no purpose. Also, it lacks useful tablet functions, such as Home and Lock buttons.



## Battery update

Two highly rated Energizer lithium AA batteries trade places in our Ratings as a result of new testing. The excellent Energizer Ultimate is now our top-scoring lithium battery. It took 1,286 shots in a digital camera and cost \$6 a pair, or 23 cents per 50 shots. The Energizer Advanced, also rated excellent, is now No. 2, taking 957 shots and costing \$5.40 a pair, or 28 cents per 50 shots.

## Central A/C: Brands that keep their cool

**Big energy savings** over earlier central air conditioners is one more reason to install a new one or replace an old one that broke. But you may want to give Amana, Goodman, and York the cold shoulder. All three brands logged the most repairs in our latest reliability surveys of more than 40,000 readers who bought a central A/C system.

Goodman, along with Rheem and Lennox, was also among the more repair-prone brands of central heat pumps, which exchange hot air for cool air in summer and do the opposite in winter. The added complexity of these systems and the fact that they're used for more of the year may help explain why 20 percent of them needed repair compared with just 13 percent for central air conditioners.

The surveys, from the Consumer Reports National Research Center, also show that fixing any central A/C system can be a real headache. Some 39 percent of subscribers who repaired either type were left without cooling for at least a day. Ten percent reported repeated repairs during the first year after installation, and 18 percent said their system broke down completely. What's more, the roughly 30 percent who had problems shelled out \$150 or more for the repair.

The good news: Choosing one of the more reliable brands in our survey can boost the odds that you will be comfortable. Here are some other steps that will help you minimize repairs and trim your cooling bill:

**Hire your own installer.** Our research showed a strong correlation between repairs and installation. For central A/Cs, 19 percent of

systems installed by new-home builders failed compared with 12 percent installed by homeowners. The gap was even wider for heat-pump units, where 28 percent of the builder-installed units failed compared with 18 percent for owner-installed systems.

**Keep it clean.** Be sure hedges and plants

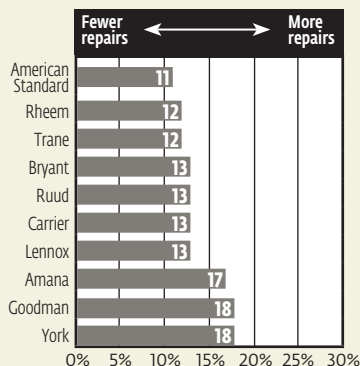
are at least 2 feet away from the outside unit. Clean grills and filters monthly. Clear debris and dirt from condenser coils and check for blockages in the drain pipe.

**Seal and insulate ducts.** Up to 30 to 40 percent of energy can escape through leaks or when ducts aren't insulated.

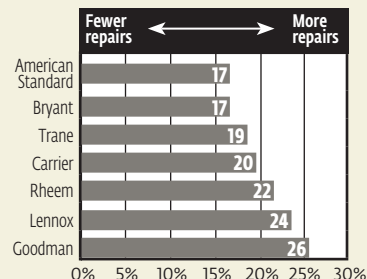
American  
Standard



### CONVENTIONAL CENTRAL AIR CONDITIONERS



### CENTRAL HEAT PUMPS



Data are based on responses from over 40,000 readers who bought a central air conditioner or heat pump from 2005 through mid-2011. The graphs show the percentage of models for each brand that were repaired; differences of less than 4 points aren't meaningful, and we've adjusted the data to eliminate differences linked solely to age and use. The graphs aren't directly comparable, since heat pumps have higher usage rates. 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.



**HANGING OUT** Patterned, quilted, one-ply, two-ply, three-ply—we tested them all to find the strongest and softest.

# Toilet paper

White Cloud, a Walmart brand, cleans up in our latest tests

**N**EVER MIND squeezing the Charmin. Our testers put 25 toilet papers through a battery of punishing tests that would have made Mr. Whipple, the mustached supermarket manager from the old TV commercials, wince.

And when we finished, Walmart's White Cloud 3-Ply Ultra Soft and Thick was the clear winner, with an overall score of 91—10 to 50 points better than the competition. It was soft, strong, and an exceptional value. The CR Best Buy cost 25 cents per 100 sheets. We also recommend its brandmate, Walmart's White Cloud Soft and Thick, though the two-ply construction isn't as strong, so it might not hold up as well.

Not a Walmart shopper? Quilted Northern Ultra Plush, 38 cents per 100 sheets, is

widely available and delivers excellent softness. Its tearing ease is also just right, so you won't get stuck with too little paper or too much. But the paper wasn't quite as strong as the top-rated White Cloud despite its three plies, and it costs more.

**Mixed results for "green" products.** Several new products answer the call for greener toilet paper, including Trader Joe's Super Soft Bath Tissue, 19 cents per 100 sheets. That product, which is made

of paper from responsibly managed forests, is chlorine free, and comes packaged in environmentally responsible plastic wrap. Its packaging claims the "sheets of heaven" are "amazingly soft, yet strong and resilient." In our tests, the paper was indeed very soft, but you'll have to settle for less than sublime strength and tearing ease.

Toilet papers made from recycled content fared worse. Strength was the shortfall with Seventh Generation, 22 cents per 100 sheets, though it excelled in other areas. Whole Foods' 365 Everyday Value, 18 cents per 100 sheets, and CVS's Earth Essential, 8 cents per 100 sheets, are at the bottom of our Ratings because of their roughness and middling strength and tearing ease. At least they offer excellent disintegration, making them an option

**TP made from recycled content fared worse than regular tissue.**



## In our labs

Think you're picky about toilet paper? We use machines and specially trained sensory panelists (wouldn't you want to be able to list that on your résumé?) to see which rolls combine strength, softness, and convenience.

**How strong?** We stack and insert 15 sheets of each toilet paper into an Instron, an apparatus normally used for sturdier stuff. It slowly pushes a steel ball through the sheets. The force required to punch through the paper is measured and recorded using computer software. Stronger papers can withstand three times as much pressure as the weakest ones before ripping. The Instron also determines how hard you'd need to pull to rip two sheets along their perforation, called tearing ease.

**How soft?** Sensory panelists check for softness in a temperature- and humidity-controlled room so the toilet-paper fibers are evaluated under controlled conditions. They first make soft, circular motions over each sample with their fingertips to form an overall impression of softness. Next, they test for pliability by gently manipulating the paper into a ball. The roughest, stiffest papers feel pointed, ridged, and cracked; the softest tend to be more pliable and conform smoothly to the hand.

**Going with the flow.** Disintegration testing reflects how well a paper will move through a home's plumbing. We put a sheet of a paper and a 2-inch stirring bar into a water-filled beaker set on a stirring plate. The time it takes for the sheet to disintegrate provides the score.

for larger households or those with clog-prone plumbing.

**Missing the tube.** Rolls that do away with the cardboard tube are the latest thing in toilet-paper marketing. Scott Naturals Tube Free has the potential to "eliminate millions of pounds of materials from the waste stream," according to its manufacturer. But when we put it on a standard toilet-paper holder to take it for a "spin," it wasn't as easy to unravel, and the paper didn't tear off as easily. The roll was also harder to place in the holder.

## How to choose

Here are two tips to keep in mind when shopping:

**Stock up and save.** Keep an eye out for sales and use coupons to lower costs. Larger packages often reduce costs per roll. But



FROM THE EXPERTS AT CONSUMER REPORTS!

# Test Your WEIGHT-LOSS SMARTS

## TRUE OR FALSE:

(Check your answers below.)

1. Sleep deprivation may increase your waistline.
2. Jogging burns more calories than swimming.
3. Your BMI is the best indicator of whether you're overweight.

True False

☐
☐
☐
☐
☐
☐

## Now It's Easy to Separate Health Fact from Fiction

1. **TRUE.** Sleep deprivation significantly **raises the appetite-boosting hormone ghrelin** while lowering the hunger-reducing hormone leptin.
2. **FALSE.** Swimming and jogging **burn about the same amount of calories.** Swimming is easier on the hips and knees, but jogging helps protect against osteoporosis.
3. **FALSE.** Your BMI (body mass index) number is **not the best indicator of being overweight.** It has several problems, including not being able to distinguish muscle from fat.



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SC254C

use your supermarket's unit-pricing labels or the calculator on your cell phone to make sure a 24-roll pack is actually a much better deal than smaller ones that will eat up less storage space.

Since the number of sheets per roll can vary significantly among brands, use the number of square feet per package to compare costs. Also consider that you're likely to use fewer sheets with multi-ply rolls than with single-ply ones.

**Understand the green claims.** If a product that's eco-friendly is your top requirement, look for toilet paper that's made not just from recycled content or trees from responsibly managed forests but from fibers recovered from paper that would otherwise end up in a landfill or incinerator. And avoid recycled products that have been bleached white using chlorine, since that can pollute air and water.

**Be kind to your plumbing.** Though most of the papers we tested disintegrated quickly, a few didn't. That could present a problem for homes with septic systems, old pipes, or large families.

#### ■ CLOSE-UP



### 1857

First commercially packaged toilet paper is produced.

### 1890

Scott begins selling toilet paper on a roll.

### 1935

Northern advertises splinter-free toilet paper.

### 1964

Charmin introduces Mr. Whipple character (George the Grocer).

### 1973

A Johnny Carson monologue sparks fear of a toilet paper shortage.

### 2010

Scott starts limited rollout of tubeless toilet paper.



## The incredible shrinking roll

In a classic "Seinfeld" episode, Jerry's pal Elaine finds herself in a paperless bathroom stall, unable to persuade her stingy neighbor to spare a square. Many CONSUMER REPORTS readers say that the cheapskate rap applies to TP makers, too, for shaving sheets or size from their rolls and using fine print, packaging tricks, and doublespeak to mask the shrinkage.

As commodity costs have risen, downsizing has become a common way for manufacturers to avoid a direct price increase. Often, it's hard to tell that a package has gone on a diet. One big offender, readers say, is Procter & Gamble's Charmin (tagline: "Enjoy the go.") Case in point: Two multipacks of Charmin Ultra Soft bought five months apart at Costco both contain 30 "Jumbo" rolls. The older package notes that the 30 jumbos equal 75 regular rolls; the newer package says they equal 83. Is Procter & Gamble giving shoppers more for their money? Hardly. The older package actually contains about 8 percent more paper (a total of about 71 square feet more, or 19 more sheets per roll). Those newer rolls are now smaller. Gotcha.

"I'm an engineer, but I had to give up trying to figure all this out," said Charles Goulston, an eagle-eyed reader from Silver Spring, Md., who alerted us.

#### 'Our biggest pack ever!'—not

Then there's the mother of all Charmins, a new 45-pack of Ultra Soft "Giant" rolls, dubbed "our biggest pack ever!" Trouble is, its predecessor, which also contained 45 Giant rolls, contained 12 percent more sheets. The rolls have been squeezed from 250 sheets to 220, says John Doncaster of Palmetto, Fla., who alerted us.

Lisa Jester, a spokeswoman for Procter & Gamble, says that the older product hasn't

been sold since 2010 and that the wording on the follow-up product has been changed. "All of the examples you sent are examples of how we have reduced sheets at the same time we have added new innovation, such as improved performance on softness, strength or absorbency to Charmin," she says.

#### Numbers games

Other brands have been downsized, too. Kimberly-Clark's Scott, known for its 1,000-sheet rolls, shrank by 9 percent—to keep in step with the industry, the company told us. But instead of reducing the number of sheets (and changing the marketing pitch), it made the sheets smaller and, it contends, stronger, so consumers can use less. "Maybe," wrote Axel and Janet Camp of Bethel, Conn., "but definitely less for more."

Similarly, William Wind of Lakewood, Colo., was unpleasantly surprised when he bought a package of Georgia-Pacific's Angel Soft bathroom tissue labeled "Our Thickest Ever!" and measured it against an older roll he had on hand. "It's also their narrowest ever," Wind wrote. "If this trend continues, things are going to get messy."



OLD SIZE

NEW SIZE



#### SLEIGHT OF HAND

The number of rolls is the same, but each roll is smaller, meaning you get less toilet paper overall.







1 White Cloud



2 Quilted Northern



3 Great Value



4 White Cloud



5 CVS

## Overview

Balancing strength and softness is the biggest challenge for toilet paper, especially those made with recycled content. While the cheapest products tend to falter, we found plenty of good values in our latest tests.

**CR Best Buy** Only one product earned this distinction, which is reserved for those that offer top performance at a low price. It is recommended.

**Recommended** These offer very good performance, though not the highest value.

### TIPS FOR BOTTOMS

- 1 White Cloud
- 2 Quilted Northern
- 5 CVS

All are soft, but **1** combines softness and strength, and its excellent disintegration is easy on clog-prone pipes. Choose **2** or **5** for wider availability and, for **2**, the easiest tearing. But neither is as strong as the top-rated White Cloud.

### IF LOW PRICE IS YOUR TOP CONCERN

- 4 White Cloud
- 7 Kirkland Signature

Costing just 19 cents per 100 sheets, **4** is the most affordable of our recommended models, though it's not quite as strong. **7** costs even less if you don't mind having to buy a 36-roll package. And **7** has slightly less tearing ease.

### GREEN AND GOOD, IF NOT GREAT

- 16 Seventh Generation

While no recycled product made our recommended list, **16** provides very good softness and excellent disintegration at a competitive price, though don't expect standout strength. Trader Joe's isn't quite as green. It's made of paper from responsibly managed forests, not recycled paper, though it's a bit stronger.

#### WATCH OUR VIDEO

Using your smart phone, download the ShopSavvy or the RedLaser app, then scan the code at right.



# Ratings Toilet paper

All tested products In performance order.

- ☒ CR Best Buy  
☒ Recommended
- ☒ Excellent  
☒ Very good  
☐ Good  
☐ Fair  
☐ Poor

Recommendation	Rank	Product	Cost  per 100 sheets	Overall score  0100 P   F   G   V   E	Test results				Features	
					Softness	Strength	Disintegration	Tearing ease	Piles	Sheets per roll
	1	White Cloud 3-Ply Ultra Soft and Thick (Walmart)	25¢	91					3	200
	2	Quilted Northern Ultra Plush	38	81					3	200
	3	Great Value Ultra Strong (Walmart)	27	77					2	200
	4	White Cloud Soft and Thick (Walmart)	19	73					2	264
	5	CVS Premium Ultra	40	72					2	200
	6	Charmin Ultra Soft	41	70					2	176
	7	Kirkland Signature (Costco)	12	69					2	425
	8	Up & Up (Target)	20	68					2	286
	9	Trader Joe's Super Soft	19	67					2	350
	10	Cottonelle Ultra Comfort Care	62	65					2	113
	11	Charmin Basic	24	65					1	264
	12	Angel Soft	17	63					2	360
	13	Scott Extra Soft	17	62					1	469
	14	Scott Rapid Dissolving	37	61					1	308
	15	Cottonelle Clean Care with Soft Ripples	44	59					1	138
	16	Seventh Generation	22	58					2	300
	17	Real Soft (Walgreens)	12	58					2	352
	18	Charmin Ultra Strong	41	57					2	176
	19	Scott Naturals Tube Free	17	57					1	440
	20	Quilted Northern Soft & Strong	27	57					2	242
	21	Marcal Small Steps	25	51					2	300
	22	Scott 1000	8	47					1	1,000
	23	Big Roll (Walgreens)	8	42					1	1,000
	24	365 Everyday Value (Whole Foods)	18	42					2	327
	25	Earth Essentials (CVS)	8	41					1	1,000

## Guide to the Ratings

**Overall score** is based on strength, softness, disintegration, and tearing ease. **Strength** reflects resistance to puncturing. **Softness** is the judgment of trained panelists. **Disintegration** reflects the amount of time needed for a sheet to break up in swirling water. **Tearing ease** is based on the separation of sheets at their perforation. **Sheets per roll** is per manufacturer's packaging. **Cost per 100 sheets** is approximate retail.

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# Cars

Road tests, auto products, hot topics

**PUMPED UP**  
The Accutire  
MS-4400B topped  
our Ratings.

## Keep up the pressure

**MAKING SURE YOUR TIRES** are properly inflated is a vital part of regular car maintenance. Underinflated tires are more prone to failure, wear faster and unevenly, waste fuel, and adversely affect braking and cornering ability. To help keep them in top condition, use a pressure gauge to check them (including the spare) at least once a month.

For an accurate read, make sure the car has been parked for several hours so that the tires are cool. Proper care of any gauge is important; if it gets dirty or has been dropped, it may not be reliable. And store it away from extreme temperatures.

The three main tire-pressure gauge designs are stick, digital, and dial. Each type has trade-offs, but we've found good models in all three designs.

Stick gauges resemble ballpoint pens and are simple and affordable. Dial gauges have more features than stick models, and may include an extension hose and bleeder valve. Though they're easy to read, some are bulky and prone to damage if dropped. Digital gauges are more resistant to dirt than stick types. Those with illuminated displays are handy in the dark.

### Inexpensive insurance

We tested 14 models: eight digital, two stick, and four dial. Prices ranged from \$4 to \$56. We gauged accuracy, ease of use, and durability, and also tested how they were affected by varying temperatures.

Accuracy and ease of use were variable among dial and digital gauges. But our testing showed that you can find a very

good tire gauge for about \$5 to \$15.

Here are some other notable findings:

- Two digital Accutire models topped the Ratings, the MS-4400B, \$11, and MS-4021B, \$10. The Intercomp 360060 dial, \$56, was also very good but was limited to 60 psi. Some mini-spare and bicycle tires need gauges that measure higher pressures.
- Most of the gauges were accurate, at least at moderate temperatures. Only the Slime 20048 dial gauge, \$6, scored below

average for accuracy. It was particularly inaccurate when cold, and it lost accuracy permanently when we dropped it 30 inches onto a concrete floor.

- Some gauges were fussy to use and hard to read. The Accutire MS-4800B digital, \$6, and the Gorilla TG2 dial, \$10, scored below average in ease of use.
- Accuracy varied among the three units of the Slime 20074 digital, \$9, when we used them at room temperatures.

### Ratings Tire gauges

All tested models In performance order.



A2 Accutire MS-4021B

- Excellent
- Very good
- Good
- Fair
- Poor

☒ Recommended

Recommendation	Rank	Brand & model	Price	Type	Overall score	Test results			
						Accuracy	Ease of use	Durability	Pressure range (psi)
					0 100 P   F   G   VG   E				
<input checked="" type="checkbox"/>	1	Accutire MS-4400B	\$11	digital	78	●	○	●	5-99
<input checked="" type="checkbox"/>	2	Accutire MS-4021B	10	digital	78	●	○	●	5-150
	3	Intercomp 360060	56	dial	75	●	○	●	0-60
	4	Accutire MS-4004B	20	digital	73	○	○	●	5-99
	5	Accutire MS-4350B	15	digital	73	○	○	●	5-99
	6	Gorilla TG1	6	stick	63	○	○	●	5-50
	7	Accutire MS-4800B	6	digital	62	●	○	●	5-99
	8	Slime 2005-A	4	stick	62	○	○	●	20-120
	9	Slime 20017	4	digital	62	○	○	●	5-150
	10	Milton s902	20	dial	60	○	○	○	0-60
	11	Slime 20071	15	digital	57	○	○	○	0-160
	12	Gorilla TG2	10	dial	48	○	○	○	0-100
	13	Slime 20074	9	digital	48	○	○	○	0-160
	14	Slime 20048	6	dial	38	○	○	○	5-60

## SMALL-SEDAN FACE-OFF

Subaru Impreza  
vs. Mazda3

Two new fuel-efficient cars race to the top of the small-sedan pack

**R**edesigned for 2012, the Subaru Impreza is now our top-rated small sedan, with a new version of the Mazda3 right on its tail. Thanks to nimble handling, a roomy interior, improved fuel economy, and a comfortable ride that rivals some luxury sedans, the all-wheel-drive Impreza earned an excellent 82 overall score in our testing, up from its previous 72. AWD usually takes a toll on gas mileage, but we measured an impressive 27 mpg overall.

The sporty, fun-to-drive Mazda3 looks even better at the gas pump. Taking advantage of Mazda's new Skyactiv drivetrain technology, which includes direct injection and a high compression ratio, it achieved 32 mpg overall. That ties it with the Toyota Corolla for the best fuel economy in the class among conventional (nonhybrid or diesel) cars. Coupled with its agile handling, well-controlled ride, and punchy performance, the Mazda3 climbed into third place, behind the Hyundai Elantra. We expect both to have above-average reliability.

**The driving experience**

On the road, the Impreza and Mazda3 shine in different ways. Both handle well with nicely weighted, responsive steering and little lean in corners. The Mazda has the edge in driving fun, with quicker steering response and sharper

feedback. The Mazda3 has a controlled ride and absorbs bumps nicely, but it can't match the road isolation of the Impreza, which delivers a more comfortable ride overall. Both cars were well balanced and easy to control in emergency situations. A sportier version of the Mazda3, the 3s, has larger wheels and a firmer suspension but a stiffer ride.

Noisy cabins are weak points in both cars. The Impreza's continuously variable transmission tends to hold engine revs high, which amplifies engine noise. But the Mazda is even worse, suffering from conspicuous road noise that drones on the highway.

Reduced weight, a new CVT, and a 148-hp, 2.0-liter four-cylinder engine help the Impreza get slightly better acceleration and 3 more mpg than the previous model. But the CVT provides too much engine braking on downhills. A five-speed manual is also available.

The Mazda3's optional 155-hp, 2.0-liter four-cylinder Skyactiv engine and new six-speed automatic transmission provide spirited acceleration that edges out the Impreza and returns 4 more mpg than the last Mazda3 we tested, with a 148-hp, 2.0-liter engine. The slightly more powerful 2.5-liter engine in the 3s models gets 25 mpg. A six-speed manual transmission is also available.

**Inside the cabins**

The interiors in both cars are fairly basic. Both provide good visibility, but the Impreza's narrower windshield pillars help it provide a better view all around.

The Impreza's front seats are generous and firm, though some drivers found the seatback to be lumpy. The rear seat can accommodate three adults comfortably, and access is easy.

The Mazda3's front seats are supportive over the long haul. Two adults can squeeze into the rear, but leg room is skimpy and access is tight.

Tall drivers fit fine in both cars. But the Mazda's tilt-and-telescoping steering wheel didn't extend far enough for some drivers, and the Impreza's didn't push in far enough.

You'll find simple controls in both cars, but the Impreza's are laid out better. Both have Bluetooth, but neither has voice control for music players; the Mazda doesn't have a USB input for an iPod or flash drive. You need to buy navigation to get satellite radio in the Impreza.

Gauges are straightforward in both cars. But when you turn the Impreza's lights on at dusk, the numerals wash out in the red backlighting.

Both trunks are nicely lined and have 60/40-split fold-down rear seats. The Mazda's is slightly larger. If you need more flexibility, either car is also available as a hatchback.





# Subaru Impreza

ROAD-TEST  
SCORE  
**82**



✓ Recommended



**BUTTONED DOWN** The Impreza's gauges are straightforward, but their readings lack contrast in some situations.

## Tested vehicle

<b>HIGHS</b>	Ride, fuel economy (for an AWD car), rear seat, visibility, controls
<b>LOWS</b>	Noise, excessive engine braking
<b>TRIM LINE</b>	Premium
<b>DRIVETRAIN</b>	148-hp, 2.0-liter, horizontally opposed four-cylinder engine; continuously variable transmission; all-wheel drive
<b>MAJOR OPTIONS</b>	Heated seats, wipers, and mirrors
<b>TESTED PRICE</b>	\$21,345

## More test findings

<b>BRAKING</b>	Very good brakes that brought short stops on wet and dry pavement.
<b>HEADLIGHTS</b>	High beams are very good; low beams are just adequate.
<b>HEAD RESTRAINTS</b>	The center-rear head restraint is too short to offer any protection for adults seated there.
<b>CHILD SEATS</b>	Although the owner's manual discourages installing any child seats in the center-rear position—the safest—we were able to securely install front- and rear-facing seats there. LATCH anchors in the outboard seats are easy to access, and there are three top-tether anchors in the sedan and hatchback.



**FUEL SAVER** The CVT helps this all-wheel-drive car achieve 27 mpg overall.



**USER FRIENDLY** The radio has very simple, easy-to-use controls.



Scan for video.

# Mazda3

ROAD-TEST  
SCORE  
**78**



✓ Recommended



**MODEST CABIN** The Mazda3's interior is more nicely finished than the Impreza's, but it is still basic.

## Tested vehicle

<b>HIGHS</b>	Handling, ride, engine and transmission, fuel economy
<b>LOWS</b>	Road noise, rear-seat room
<b>TRIM LINE</b>	Skyactiv i Touring
<b>DRIVETRAIN</b>	155-hp, 2.0-liter four-cylinder engine; six-speed automatic transmission; front-wheel drive
<b>MAJOR OPTIONS</b>	None
<b>TESTED PRICE</b>	\$20,145

## More test findings

<b>BRAKING</b>	Very good, but stopping distances are a bit long for this class.
<b>HEADLIGHTS</b>	Good distance from low and high beams; high beams have better intensity.
<b>HEAD RESTRAINTS</b>	The center-rear seat has no head restraint.
<b>CHILD SEATS</b>	Seats may be hard to install in the center-rear position. Fitting large rear-facing seats in the outboard positions might require moving the front seats forward, reducing front leg room. Lower-LATCH anchors are easy to access. There are three top-tether anchors.



Scan for video.

**EFFICIENT** Mazda's Skyactiv engine delivers an excellent 32 mpg overall.

# Subcompacts

Bantam-sized cars grow in sophistication



**SUBCOMPACT CARS** were once collectively known as “penalty boxes” for their noisiness, rudimentary interiors, uncomfortable rides, and weak performance.

But a spate of redesigns brought improvements in performance, equipment levels, and comfort. Combined with their affordable prices and good fuel economy, several subcompacts are now good all-around choices for people looking to stretch their budget. And hatchbacks provide extra cargo-carrying versatility.

Among sedans, the Kia Rio is the top rated, thanks to nimble handling and a well-equipped cabin. But the hatchback version scored lower. The new Chevrolet Sonic is a relatively refined model and offers a quiet cabin for the class, agile handling, and excellent braking. But the Sonic’s fuel economy is mediocre. We also tested a Sonic LTZ hatchback with a turbo engine and a manual transmission, but it was expensive and didn’t live up to its sporty aspirations.

There’s nothing fancy about the Hyundai Accent GLS sedan and SE hatchback, but they hit the mark for basic, sensible transportation and are good values.

Rounding out our pack are the unimpressive redesign of the Nissan Versa sedan and the perennially low-scoring Toyota Yaris hatchback.

Prices for this group range from the Nissan Versa’s \$15,490 to the Sonic LTZ hatchback’s \$19,870.

## Ratings

All tested models In performance order, within types.

● Excellent  
 ● Very good  
 ○ Good  
 ● Fair  
 ● Poor

☒ Recommended

	Make & model	Price as tested	In this group	Overall road-test score	Predicted reliability	Overall mpg
Recommended	Rank			0 100 P   F   G   V   E		

### A SUBCOMPACT SEDANS (AUTOMATIC)

1	Kia Rio EX	\$17,275	●	67	new	30
2	Hyundai Accent GLS	16,050	●	65	new	31
3	Chevrolet Sonic LT (1.8)	17,290	●	65	new	28
4	Ford Fiesta SE	16,595		61	●	33
5	Nissan Versa SV	15,490	●	53	new	32

### B SUBCOMPACT HATCHBACKS (AUTOMATIC)

✓	1	Honda Fit (base)	\$16,745	68	●	30
✓	2	Nissan Versa 1.8 SL	19,150	67	○	28
	3	Kia Rio EX	17,475	63	new	29
	4	Mazda2 Touring	17,075	60	NA	30
✓	5	Scion xD	16,620	60	●	29
	6	Toyota Yaris LE	17,290	41	●	32

### C SUBCOMPACT HATCHBACKS (MANUAL)

✓	1	Honda Fit Sport	\$16,730	76	●	33	
	2	Hyundai Accent SE	16,695	●	72	new	32
	3	Ford Fiesta SES	17,795	65	●	32	
	4	Mazda2 Sport	14,770	64	NA	33	
✓	5	Scion xD	15,820	62	●	34	
	6	Chevrolet Sonic LTZ (1.4T)	19,870	●	59	new	30

**Why some vehicles are not recommended** The Accent, Rio, Sonic, and Versa sedan are too new for us to have reliability data. We do not have sufficient reliability data for the Mazda2. Both Ford Fiestas have subpar reliability. The Sonic LTZ, Versa sedan, and Yaris score too low in our tests.



# Hyundai Accent



**FRUGAL** Both versions of the Accent are inexpensive and economical.

ROAD-TEST SCORE  
**65**  
Sedan

ROAD-TEST SCORE  
**72**  
Hatchback



**ON THE DIAL** In SE trim, the Accent includes steering-wheel audio controls.

The redesigned Accent scores near the top of our Ratings in sedan and hatchback form. It's economical to buy and run, and the 138-hp four-cylinder engine provides adequate power. Handling is responsive, more so in sporty SE trim. The well-constructed cabin has plenty of room up-front. But the ride is jittery, the rear seats are small, and the cabin is noisy. We do not have data yet to predict reliability.

## Balancing act

The Accent's suspension provides some isolation, but road bumps still punch through and there's some highway jiggling. Road and wind noise intrudes, but it's tolerable. Engine noise is pronounced under hard acceleration.

Handling is nimble, with quick and well-weighted steering, but feedback could be a touch better. With its bigger wheels and tires and a tweaked suspension, the SE hatchback has better feedback and is the more responsive of the two. A tight turning circle makes parking easy. When pushed to its handling limits, the GLS sedan plowed early on, but it proved secure and managed a decent speed through our avoidance maneuver. The SE hatchback provides more grip and posted a much better speed through the course.

The 138-hp, 1.6-liter four-cylinder engine provides adequate power and excellent fuel economy. The smooth, responsive six-speed

automatic transmission in our sedan wrings the most from the engine. The six-speed manual in our hatchback has well-chosen ratios, short throws, precise shifting, and light clutch effort. We got 31 mpg overall with the automatic and 32 mpg with the manual.

## Simple accommodations

Both interiors are basic, with nicely textured but hard plastics. Most parts fit together well, but we noted some misalignments.

Drivers will find ample room. The steering wheel tilts but doesn't telescope; most of our drivers found it to be too far away.

The front seats are firm but flat. The driver's seat has a manual seat-height adjustment that flattens the bottom-cushion as you raise it. The rear can hold two adults comfortably, but three is a squeeze.

The gauges are clear and easy to read, and controls are very simple, with clear knobs to adjust the climate and radio. The Accent GLS is attractively priced, but it lacks some common standard features, such as remote keyless entry. The SE is nicely equipped for the price.

The sedan's trunk provides a little more luggage room than the hatchback's cargo area, but either space can be expanded by folding the 60/40-split rear seats. A spare tire and jack aren't standard; an air compressor and tire sealant are provided instead.

## Tested vehicle

<b>HIGHS</b>	Fuel economy, secure handling, controls, transmission (automatic)
<b>LOWS</b>	Ride, noise, rear visibility (hatchback)
<b>TRIM LINE</b>	SE hatchback, GLS sedan
<b>DRIVETRAIN</b>	138 hp, 1.6-liter four-cylinder engine; six-speed manual (SE); six-speed automatic (GLS); front-wheel drive
<b>MAJOR OPTIONS</b>	None
<b>TESTED PRICE</b>	\$16,695 (SE), \$16,050 (GLS)

## The Accent line

<b>BODY STYLES</b>	4-door hatchback; sedan
<b>DRIVE WHEELS</b>	Front
<b>TRIM LINES</b>	GS, GLS, SE
<b>ENGINE &amp; TRANSMISSIONS</b>	138 hp, 1.6-liter four-cylinder; six-speed manual; six-speed automatic
<b>BASE PRICE RANGE</b>	\$12,545-\$16,795

## More test findings

<b>BRAKING</b>	Stops were short overall.
<b>HEADLIGHTS</b>	Headlamps aren't very bright but have enough reach.
<b>ACCESS</b>	Easy to the front, a bit harder to the rear.
<b>CABIN STORAGE</b>	Modest.
<b>HEAD RESTRAINTS</b>	The center-rear restraint must be raised to be effective.
<b>VISIBILITY</b>	Good to the front and side. The hatchback's rear window is small. Big side mirrors help.
<b>CHILD SEATS</b>	Large convertible seats may be difficult to fit in the center-rear position. The front seat might need to be moved forward to allow for a rear-facing child seat behind it.



Scan for video.

# Chevrolet Sonic



The Sonic has a relatively quiet cabin, responsive handling, and excellent brakes. The ride is comfortable for the class. The sedan is quick, but the turbocharged LTZ hatchback serves up even brisker acceleration. Fuel economy doesn't stand out for either engine. The front seats lack support, and the rear is tight. The sedan has a very roomy trunk. The hatchback provides more cargo flexibility but worsens visibility. The Sonic is too new for us to predict reliability.

## Quiet and quick

The Sonic has a steady highway ride that's well isolated. The interior is relatively quiet, with some road, wind, and engine noise.

Both Sonics feel responsive, with quick steering and well-contained body lean, but on-center steering feel is scant. Our LT sedan tends to dart about a bit, but that was not evident in the LTZ hatchback. Both managed a high speed through our avoidance maneuver and felt predictable and controlled.

Our sedan came with a 138-hp, 1.8-liter four-cylinder engine and six-speed automatic transmission. With that combo, acceleration is quick, but it posted a mediocre 28 mpg overall and was often slow to downshift. With a turbocharged 138-hp, 1.4-liter four and six-speed manual, our hatchback accelerates briskly from a stop, but it's not as responsive once under way. It got slightly better gas mileage at 30 mpg overall. The manual's gear ratios optimize fuel economy, but they force the driver to downshift



## STURDY CHARACTER

The Sonic feels solid, but fuel economy comes up short.

frequently, often having to go down several gears to maintain speed on slight inclines. The shifter wasn't impressive, either, with long throws and a rubbery, notchy feel.

## Snug surroundings

The interior is basic, with hard plastics, a thin headliner, and cut-rate carpeting. But nicely textured plastics keep it from looking cheap.

Drivers have ample seat travel and a tilt-and-telescopic steering wheel with a good adjustment range. The driving position is narrow, with the center console intruding into right leg room and the foot rest pushing inboard. Shorter drivers sit high but found it hard to fully depress the manual's clutch pedal.

The seats have limited adjustments, and their cushions aren't very supportive. The LTZ's leatherette seats are more supportive than the base cloth ones. Lateral support is good, and a folding armrest is a nice touch. Room is tight in back, but the cushion is high enough for thigh support, and head room is adequate.

Motorcycle-inspired instruments include a large analog tachometer paired with a digital gauge cluster. Climate and radio controls are mostly clear, but both are a reach away.

The sedan's trunk is spacious, but its hinges protrude downward and can press on items underneath. Cargo space is more limited in the hatchback. Either can be expanded by folding the 60/40-split rear seatbacks.

ROAD-TEST SCORE

65

Sedan

ROAD-TEST SCORE

59

Hatchback

## Tested vehicle

<b>HIGHS</b>	Braking, large trunk (sedan), quick and quiet for the class
<b>LOWS</b>	So-so fuel economy, narrow driving position, seat comfort, steering (LT), manual gear ratios and shifter, rear-seat room, rear visibility (hatch)
<b>TRIM LINES</b>	LT sedan, LTZ hatchback
<b>DRIVETRAINS</b>	138 hp, 1.8-liter four-cylinder engine; six-speed automatic transmission (LT sedan); 138-hp, 1.4-liter turbocharged four-cylinder engine; six-speed manual transmission (LTZ hatchback); front-wheel drive
<b>MAJOR OPTIONS</b>	Remote start, cruise control, Bluetooth, USB port (LT sedan); power sunroof (LTZ hatchback)
<b>TESTED PRICE</b>	LT sedan: \$17,290; LTZ hatchback: \$19,870

## The Sonic line

<b>BODY STYLES</b>	4-door hatchback; sedan
<b>DRIVE WHEELS</b>	Front
<b>TRIM LINES</b>	LS, LT, LTZ
<b>ENGINES &amp; TRANSMISSIONS</b>	138 hp, 1.8-liter four-cylinder, 138 hp, 1.4-liter four-cylinder turbo; five-speed manual, six-speed manual, six-speed automatic
<b>BASE PRICES</b>	\$13,865-\$18,625

## More test findings

<b>BRAKING</b>	Very short stops overall.
<b>HEADLIGHTS</b>	Low beams provide good distance and very good intensity; high beams shine farther.
<b>ACCESS</b>	Easy overall.
<b>VISIBILITY</b>	Windshield pillars are relatively thick. Hatchback has small rear window and thick rear roof pillars.
<b>CABIN STORAGE</b>	Moderate, with several dashboard cubbies.
<b>HEAD RESTRAINTS</b>	The center-rear position has no restraint and doesn't provide neck protection.
<b>CHILD SEATS</b>	It can be tough to fit and secure seats in the center rear.



Scan for video.





**ON TOP** The Rio sedan outscores its subcompact competitors.



# Kia Rio

The Rio is a solid and well-equipped car. It benefits from nimble handling, a smooth transmission, and very simple controls, and it provides plenty of features for the price. The Rio sedan is the top-scoring car in its class, and the hatchback is midpack. But both suffer from the stiff ride and space limitations that are typical of subcompacts. Reliability remains to be seen.

## Responsive handling

The Rio's small size and limited body lean help make it feel responsive in corners. Steering is nicely weighted but short on feedback. At the track, the Rio threaded our avoidance maneuver at a high speed. At-the-limit handling is agile and predictable.

The ride is stiff and choppy. But it's never unduly harsh. A mix of road, wind, and engine sounds come through but aren't offensive.

The 138-hp, 1.6-liter four-cylinder engine has decent power but isn't especially quick for this class. The six-speed automatic transmission shifts quickly and smoothly and provides timely, if frequent, downshifts to get the most from the small engine. A six-speed manual is available only on lower-trim LX models. Overall fuel economy of 29 mpg for the hatch and 30 mpg for the sedan falls a bit short of the 31 mpg we got from the same powertrain in the Hyundai Accent sedan.

## Covering the basics

The hard interior plastics are nicely grained and well put together, keeping the cabin from looking cheap.

The Rio has a roomy driving position for such a small car. The tilt-and-telescopic steering wheel is a nice feature for this class, but it doesn't extend enough for some drivers.

The flat front seats are firm and comfortable and provide some lateral support, but there is no lumbar adjustment, and some of our test drivers wanted more lower-back support. The rear seat has decent thigh support and can fit two adults, but it's too tight for three.

Controls are very simple. The climate system uses three large knobs and a row of big, cool-looking toggle switches. Our EX's base radio is one of the simplest on the market, with a clear display and large buttons and knobs. Microsoft's UVO voice-control system comes with the higher-end radio, which uses a more complicated touch-screen interface but also has a backup camera. The gauges are very large and easy to read. Side mirror defrosters are a nice addition at this price.

Hatchback cargo space is relatively tight; the sedan's trunk is roomier. The 60/40-split rear seatbacks fold to expand storage in both body styles. There is no spare tire; you get only an air compressor and a can of sealant to repair a flat.



**SIMPLE PLEASURES** The Rio has straightforward gauges and large knobs for the radio and climate controls.

## Tested vehicle

<b>HIGHS</b>	Transmission, controls, equipment levels
<b>LOWS</b>	Ride, noise, rear visibility (hatchback)
<b>TRIM LINE</b>	EX sedan, hatchback
<b>DRIVETRAIN</b>	138-hp, 1.6-liter four-cylinder engine; six-speed automatic transmission; front-wheel drive
<b>MAJOR OPTIONS</b>	None
<b>TESTED PRICE</b>	EX sedan: \$17,275; EX hatchback: \$17,475

## The Rio line

<b>BODY STYLES</b>	4-door hatchback; sedan
<b>DRIVE WHEELS</b>	Front
<b>TRIM LINES</b>	LX, EX, SX
<b>ENGINE &amp; TRANSMISSIONS</b>	138 hp, 1.6-liter four-cylinder; six-speed manual, six-speed automatic
<b>BASE PRICES</b>	\$13,400-\$17,000

## More test findings

<b>BRAKING</b>	Very good overall, with short stops on dry pavement.
<b>HEADLIGHTS</b>	Low-beam headlights had only fair reach. High beams reached far enough but had weaker intensity than most other headlights.
<b>ACCESS</b>	Easy in front, but a bit more difficult to the rear.
<b>VISIBILITY</b>	Good to the front and sides. The hatchback's small rear window and thick rear roof pillars impair rear vision. An optional rear-view camera helps with backing up.
<b>CABIN STORAGE</b>	Modest.
<b>HEAD RESTRAINTS</b>	The center-rear seat has no head restraint.
<b>CHILD SEATS</b>	All can be secured with belts or LATCH anchors. Larger rear-facing seats might require pulling the front seats forward.



Scan for video.

# Nissan Versa

ROAD-TEST  
SCORE  
**53**

The redesigned Versa sedan doesn't measure up to the previous model. The changes plunged it from the top of our Ratings to the bottom. The sedan retains a roomy rear seat and trunk, and it gets much better fuel economy, but it's slow, noisy, and clumsy. Overall, the Versa's evident cost-cutting makes it an unappealing choice in this group. The Versa hatchback is a better pick because it's still based on the old design. The sedan's reliability remains to be seen.

## Grating experience

The loud engine's whirring, exacerbated by the CVT, can be overwhelming and offensive. The ride isn't bad, with good road isolation, but it's jittery on the highway.

Handling is ungainly, an unusual quality for a subcompact. Soft springing creates a lot of body lean, and the steering has scant feedback. The Versa reached its handling limits early at the track. It was ultimately secure in our avoidance maneuver, where it posted a commendable speed, but persistent understeer reduced driver confidence.

The 109-hp, 1.6-liter four-cylinder engine and CVT combination gets an excellent 32 mpg overall on regular fuel, but it returns just average performance. The transmission is smooth but often makes the engine whine. A five-speed manual transmission is available only in the lowest trim level.

## Space considerations

The Versa's interior is rudimentary. Its controls, upholstery, carpeting, and headliner are all low-rent, with exposed screw heads evident in



**VERSA VICE** The interior is blatantly cheap, and the steering wheel doesn't telescope.

the cabin. Oddly, the trunk seems better finished than the cabin, with a lined lid and thick, plush mat.

The cabin is narrow, although big windows make it feel airy. Most drivers found the nontelescopic steering wheel a long reach away. There's plenty of head and foot room, but drivers might feel wedged between the door armrest and the center dashboard console. There's no center armrest for the driver, a notable omission.

The short, tight front seats lack lower back and thigh support. Two six-footers have a surprising amount of room in the rear seat, although it's low and lacks thigh support. Seating three across is a squeeze.

Controls are straightforward, but the radio lacks a tuning knob and the climate-control knobs feel cheap and have faint markings. The seat-height adjuster is wedged against the door, where it's hard to reach, and it's easy to confuse the adjacent identical-looking fuel-door and hood releases.

The big trunk will hold four large suitcases, but the rear seatbacks in our car don't fold.

## Tested vehicle

<b>HIGHS</b>	Fuel economy, rear seat, trunk
<b>LOWS</b>	Agility, engine noise, front-seat comfort, fit and finish
<b>TRIM LINE</b>	SV
<b>DRIVETRAIN</b>	109-hp, 1.6-liter four-cylinder engine; continuously variable automatic transmission; front-wheel drive
<b>MAJOR OPTIONS</b>	None
<b>TESTED PRICE</b>	\$15,490

## The Versa line

<b>BODY STYLES</b>	Sedan (the hatchback is based on an earlier design)
<b>DRIVE WHEELS</b>	Front
<b>TRIM LINES</b>	S, SV, SL
<b>ENGINE &amp; TRANSMISSIONS</b>	109 hp, 1.6-liter four-cylinder engine; five-speed manual, CVT
<b>BASE PRICES</b>	\$10,990-\$15,560

## More test findings

<b>BRAKING</b>	Relatively long stops.
<b>HEADLIGHTS</b>	Both low and high beams provide very good forward visibility. The high beams give off a narrow barrel of light, reducing illumination to the sides of the road.
<b>ACCESS</b>	Easy in front, but there are no assist grips. The sloping roofline makes rear access a bit harder.
<b>VISIBILITY</b>	Good overall.
<b>CABIN STORAGE</b>	Modest.
<b>HEAD RESTRAINTS</b>	The center-rear seat has no head restraint.
<b>CHILD SEATS</b>	It may be hard to secure a rear-facing infant seat in the outboard positions using belts. Lower LATCH anchors are awkward to access.



Scan for video.







**BARE BONES**  
A redesign leaves the low-scoring Yaris a rough also-ran.

# Toyota Yaris

ROAD-TEST  
SCORE  
**41**

Despite being redesigned for 2012, the Yaris is still bare-bones transportation, while its better competitors are becoming more refined. Its fuel economy of 32 mpg overall is excellent, and the redesign has brought some improvements in the driving position and instrument layout. But the Yaris is noisy, its ride is choppy, the interior is austere, and the driving position remains flawed. Handling lacks agility, and the car is slow to accelerate. Based on the previous model's record, reliability is likely to be very good. But the Yaris scores too low for us to recommend.

## Underachiever

The Yaris' ride is compliant at low speeds. But on the highway, frequent and quick body motions make it feel jittery and unsettled. The cabin suffers from abundant road, tire, and engine noise that can make conversation hard.

Unlike many subcompacts, the Yaris is not particularly agile. Its tidy dimensions and tight turning circle help out with maneuverability, but body lean and unsettled pitches are common in routine driving. The steering is devoid of feedback and feels overly light and imprecise. The Yaris has low emergency-handling limits and, despite a commendable speed through our avoidance maneuver, drivers did not feel confident.

Acceleration is relatively slow, and the 106-hp, 1.5-liter four-cylinder engine provides just adequate performance for highway merging. Shifts from the four-speed automatic transmission can be rough. A five-speed manual transmission is available but only on

the low-end, two-door hatchback and the top-level, sporty SE models.

## No-frills cabin

The interior uses mostly cheap, hard plastics. There are some wide panel gaps and poorly fitting pieces. The headliner and carpet are thin and strictly low budget. Several blank panels in our car cover spaces where switches would be located in other versions.

Poor placement of the steering wheel and pedals make for an awkward driving position. The steering wheel tilts but has no telescopic adjustment, and almost all our drivers found it too far away. The throttle and brake pedals, on the other hand, are too close and there's little room for the driver's left foot, which forces a stretched-arms, bent-legs posture for the driver. Head room, at least, is good.

The front seats are basic, with lackluster support and no lumbar adjustment. The rear seat provides adequate leg and head room for two adults, which is notable in this category, but it is too narrow for three passengers. Cushions are hard and flat.

Instruments are dark and lack contrast, and a blank dial in our car fills the space where higher-end models get a tachometer. Many controls and switches are not lit, including those for the mirrors and locks. The radio looks like a cheap add-on accessory, with a small display, no tuning knob, and tiny controls that are difficult to read and use. But the climate-control knobs are simple and easy to use.

The cargo area is small but has a flat floor and expands by folding the 60/40-split rear seatbacks.



**NO TACH** The cabin is spare, and a blank dial in the LE sits where a tachometer would be.

## Tested vehicle

<b>HIGHS</b>	Fuel economy, relatively roomy rear seat, turning circle
<b>LOWS</b>	Noise, ride, agility, driving position, front-seat comfort, fit and finish, radio controls, rear visibility
<b>TRIM LINE</b>	LE
<b>DRIVETRAIN</b>	106-hp, 1.5-liter four-cylinder engine; four-speed automatic transmission; front-wheel drive
<b>MAJOR OPTIONS</b>	Cruise control, floor and cargo mats
<b>TESTED PRICE</b>	\$17,290

## The Yaris line

<b>BODY STYLES</b>	Two-door hatchback; four-door hatchback
<b>DRIVE WHEELS</b>	Front
<b>TRIM LINES</b>	L, LE, SE
<b>ENGINE &amp; TRANSMISSIONS</b>	106 hp, 1.5-liter four; five-speed manual, four-speed automatic
<b>BASE PRICES</b>	\$14,115–\$17,200

## More test findings

<b>BRAKING</b>	Short stops overall.
<b>HEADLIGHTS</b>	Low beams provide good illumination and intensity. High beams improve forward visibility but reduce the light right in front of the car.
<b>ACCESS</b>	Easy, but with a low roofline and narrow door openings.
<b>VISIBILITY</b>	Thick rear pillars block the view to the rear sides, and the small rear window and rear head restraints interfere with rear visibility. Unusual single windshield wiper provides impressive coverage.
<b>CABIN STORAGE</b>	Modest.
<b>HEAD RESTRAINTS</b>	The rear-center restraint is too low for protection even when it's raised.
<b>CHILD SEATS</b>	Forward-facing seats may be hard to fit in the rear-center seat. Installing a child seat in the rear passenger side prohibits a passenger from sitting in the center.



Scan for video.

# Compare

## Small sedans

Recommended Recommended



VERSION	Subaru Impreza	Mazda3
<b>TRIM LINE</b>	Premium	i Touring
<b>PRICE: BASE/TESTED</b> <sup>①</sup>	\$19,095/\$21,345	\$19,300/\$20,145
<b>DRIVETRAIN</b>		
Engine	2.0-liter 4-cyl. (148 hp)	2.0-liter 4-cyl. (155 hp)
Transmission	CVT	6-speed automatic
Drive wheels	AWD	Front
<b>TIRES TESTED</b>		
Model & size	Yokohama Avid S30, size P205/55R16 89V	Bridgestone Turanza EL400 02, size P205/55R16 89H
<b>RATINGS</b>		
<b>PERFORMANCE</b>		
Acceleration	○	○
0 to 60 mph, sec.	9.2	9.1
45 to 65 mph, sec.	6.0	5.6
Quarter-mile, sec.	17.2	17.1
Transmission	●	●
Routine handling	●	●
Emergency handling	●	●
Avoid. maneuver, speed, mph	52.5	53.0
Braking	●	●
From 60 mph, dry/wet, ft.	129/143	139/150
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	○	○
<b>PREDICTED RELIABILITY</b>	●	●
<b>FUEL</b>		
Overall mpg	27	32
City/highway mpg	20/35	22/43
Type	regular	regular
Capacity, gal./Cruising range, mi.	14.5/395	14.5/465
Annual cost, 12K mi. at \$3.60/gal.	\$1,585	\$1,350
<b>SAFETY</b>		
<b>CRASH TESTS</b>		
IIHS frontal offset	Good	Good
IIHS side	Good	Good
IIHS rear	Good	Good
IIHS roof strength	Good	Good
NHTSA front, driver/pass.	NA/NA	●/●
NHTSA side, driver/rear	NA/NA	●/○
NHTSA rollover 2WD/4WD	NA/NA	●/NA
<b>AIR BAGS</b>		
Side, front/rear	std./no	std./no
Head protection	standard	standard
<b>ACTIVE SAFETY</b>		
Antilock brakes	standard	standard
Traction control	standard	standard
Stability control	standard	standard
<b>SPECIFICATIONS</b>		
<b>DIMENSIONS AND WEIGHT</b>		
Length/width/height, in.	180/69/58	181/69/58
Wheelbase, in.	104	104
Turning circle, ft.	38	36
Ground clearance, in.	4.5	4.0
Curb weight, lb. (% front/rear)	3,015 (60/40)	2,925 (61/39)
Maximum load, lb.	850	850
Luggage, suitcases+duffels	2+2	2+3
Towing capacity, lb.	NR	NR
<b>INTERIOR ROOM</b>		
Front shoulder room, in.	55.5	54.0
Front leg room, in.	41.5	41.0
Front head room, in. <sup>②</sup>	5.5	4.5
Rear shoulder room, in.	53.0	53.0
Rear leg room, in.	29.0	25.0
Rear head room, in. <sup>②</sup>	3.0	3.0

<sup>①</sup> Based on sticker price at time of purchase. <sup>②</sup> Above a person 5'9" tall.

## Subcompacts



VERSION	Hyundai Accent	Hyundai Accent
<b>TRIM LINE</b>	SE hatchback	GLS sedan
<b>PRICE: BASE/TESTED</b> <sup>①</sup>	\$15,795/\$16,695	\$15,195/\$16,050
<b>DRIVETRAIN</b>		
Engine	1.6-liter 4-cyl. (138 hp)	1.6-liter 4-cyl. (138 hp)
Transmission	6-speed manual	6-speed automatic
Drive wheels	Front	Front
<b>TIRES TESTED</b>		
Model & size	Kumho Solus KH25, size P195/50R16 83H	Hankook Optimo H724, size P175/70R14 84T
<b>RATINGS</b>		
<b>PERFORMANCE</b>		
Acceleration	●	○
0 to 60 mph, sec.	8.5	10.3
45 to 65 mph, sec.	5.6	6.9
Quarter-mile, sec.	16.8	17.8
Transmission	●	●
Routine handling	●	●
Emergency handling	●	○
Avoid. maneuver, speed, mph	55.0	51.5
Braking	●	●
From 60 mph, dry/wet, ft.	136/147	134/146
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	○	○
<b>PREDICTED RELIABILITY</b>	New	New
<b>FUEL</b>		
Overall mpg	32	31
City/highway mpg	24/40	20/45
Type	regular	regular
Capacity, gal./Cruising range, mi.	11.4/365	11.4/350
Annual cost, 12K mi. at \$3.60/gal.	\$1,355	\$1,405
<b>SAFETY</b>		
<b>CRASH TESTS</b>		
IIHS frontal offset	Good	Good
IIHS side	Acceptable	Acceptable
IIHS rear	Good	Good
IIHS roof strength	Good	Good
NHTSA front, driver/pass.	●/●	●/●
NHTSA side, driver/rear	●/○	●/○
NHTSA rollover 2WD/4WD	●/NA	●/NA
<b>AIR BAGS</b>		
Side, front/rear	std./no	std./no
Head protection	standard	standard
<b>ACTIVE SAFETY</b>		
Antilock brakes	standard	standard
Traction control	standard	standard
Stability control	standard	standard
<b>SPECIFICATIONS</b>		
<b>DIMENSIONS AND WEIGHT</b>		
Length/width/height, in.	162/67/57	172/67/57
Wheelbase, in.	101	101
Turning circle, ft.	37	37
Ground clearance, in.	4.5	4.5
Curb weight, lb. (% front/rear)	2,510 (61/39)	2,550 (62/38)
Maximum load, lb.	850	850
Luggage, suitcases+duffels	2+2	3+1
Towing capacity, lb.	NR	NR
<b>INTERIOR ROOM</b>		
Front shoulder room, in.	53.0	53.0
Front leg room, in.	41.0	41.5
Front head room, in. <sup>②</sup>	4.5	5.0
Rear shoulder room, in.	51.0	51.0
Rear leg room, in.	26.5	26.0
Rear head room, in. <sup>②</sup>	2.5	2.0

<sup>①</sup> Based on sticker price at time of purchase. <sup>②</sup> Above a person 5'9" tall.





	Chevrolet Sonic	Chevrolet Sonic	Kia Rio	Kia Rio	Nissan Versa	Toyota Yaris
	LT sedan	LTZ hatchback	EX sedan	EX hatchback	SV	LE
	\$16,005/\$17,290	\$17,235/\$19,870	\$16,300/\$17,275	\$16,500/\$17,475	\$14,560/\$15,490	\$16,100/\$17,290
	1.8-liter 4-cyl. (138 hp) 6-speed automatic Front	1.4-liter 4-cyl. (138 hp) turbo 6-speed manual Front	1.6-liter 4-cyl. (138 hp) 6-speed automatic Front	1.6-liter 4-cyl. (138 hp) 6-speed automatic Front	1.6-liter 4-cyl. (109 hp) CVT Front	1.5-liter 4-cyl. (106 hp) 4-speed automatic Front
	Hankook Optimo H428, size P195/65R15 89H	Hankook Optimo H428, size P205/50R17 88H	Kumho Solus KH25, size P185/65R15 86T	Kumho Solus KH25, size P185/65R15 86T	Continental ContiPro Contact, size P185/65R15 86H	Bridgestone Turanza EL400 02, size P175/65R15 84H
	○	●	○	○	○	○
	9.3	8.9	9.5	9.9	10.6	10.8
	6.6	5.8	6.1	6.7	6.6	6.8
	17.1	16.9	17.3	17.5	18.1	18.3
	●	○	●	●	●	●
	●	●	●	●	○	○
	●	●	●	●	○	○
	54.0	55.0	55.0	55.0	54.5	54.0
	●	●	●	●	●	●
	128/139	130/140	138/148	136/146	140/152	137/149
	○	○	●	●	●	○
	○	○	○	○	○	○
	○	○	○	○	●	●
	○	○	●	●	○	○
	○	○	●	●	○	○
	●	●	○	○	●	○
	●	●	○	○	●	○
	●	●	○	○	●	○
	○	○	○	○	○	○
	○	○	○	○	○	○
	New	New	New	New	New	●
	28	30	30	29	32	32
	19/38	21/39	22/39	21/37	23/40	23/41
	regular	regular	regular	regular	regular	regular
	12.2/345	12.2/360	11.3/340	11.3/325	11.3/360	11.1/350
	\$1,530	\$1,455	\$1,435	\$1,495	\$1,350	\$1,360
	Good	Good	NA	NA	Good	Good
	Good	Good	NA	NA	Good	Good
	Good	Good	NA	NA	Good	Good
	Good	Good	NA	NA	Good	Good
	●/○	●/○	NA/NA	NA/NA	●/○	●/○
	●/○	●/○	NA/NA	NA/NA	○/○	●/○
	○/NA	○/NA	NA/NA	NA/NA	○/NA	○/NA
	std./std.	std./std.	std./no	std./no	std./no	std./no
	standard	standard	standard	standard	standard	standard
	standard	standard	standard	standard	standard	standard
	standard	standard	standard	standard	standard	standard
	173/68/60	159/68/60	172/68/57	159/68/57	175/67/60	155/67/59
	99	99	101	101	102	99
	36	38	37	37	38	34
	4.0	4.5	4.5	4.5	5.0	4.5
	2,765 (62/38)	2,815 (63/37)	2,575 (62/38)	2,565 (63/37)	2,430 (59/41)	2,385 (62/38)
	895	850	925	925	850	845
	3+0	1+1	2+3	1+3	4+0	1+1
	NR	NR	NR	NR	NR	NR
	52.0	51.5	52.5	52.5	50.5	51.5
	42.0	41.5	42.0	42.0	41.0	41.5
	5.5	3.5	5.0	5.0	5.0	4.5
	52.0	52.0	49.5	49.5	50.5	49.5
	24.0	25.0	26.0	26.0	32.0	26.0
	2.5	3.5	2.5	3.0	2.0	2.0

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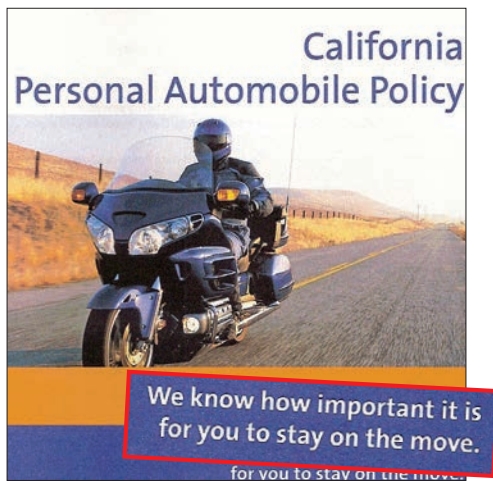






## Ah-CHOOO!

A soldier deployed to Afghanistan marveled at the tissues he found in a NATO bazaar: "What will the marketing department think of next?"



## Uneasy rider

"Perhaps even more important," notes a reader who received this booklet after buying motorcycle insurance, "is for you to stay on the right side of the road!"



## Stuck in gear

"I hope this design didn't come from the engineering department," a reader writes, "as I'm pretty sure this configuration wouldn't get you too far!"



## How about "Easy as 1-2-3"?

This helpful message was on an Amazon.com picture of a screw extractor and drill bit set.



## ... Or not

Apparently, freedom's just another word for addiction.



## Erases wrinkles, too!



## Identity crisis

Who is this guy? Jeff London, chief medical researcher for VeinEase ("when your LEGS and FEET are Screaming Out for Help"), or D. Simpson, head chief research and labs for Ultra LipoSlim Advanced ("you can NOW reach your ideal weight within days!)? Neither company returned our calls.

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# Canada Extra

Information from CONSUMER REPORTS® for Canadian readers

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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.

## Food processors & choppers

Report and Ratings, page 42

**Recommended models only** From 47 tested.

Rec.	Rank	Brand & model	Price	Specs		Overall score
				Weight (lb.)	Claimed capacity (cups)	

**A FOOD PROCESSORS** Mini-bowls help when chopping, puréeing, or grating small quantities.

<input checked="" type="checkbox"/>	4	KitchenAid KFP715	\$150	11	7	67
<input checked="" type="checkbox"/>	5	KitchenAid KFP750 1,2	200	17	12	65
<input checked="" type="checkbox"/>	6	Magimix Cuisine 5150 1,2,3,4	415	17	15	64

Rec.	Rank	Brand & model	Price	Specs		Overall score
				Weight (lb.)	Claimed capacity (cups)	

**B CHOPPERS** These are for small jobs and lack the ability to slice or shred food.

<input checked="" type="checkbox"/>	1	Ninja Master Prep Professional QB1004C	\$70*	3	2.5	70
<input checked="" type="checkbox"/>	2	Cuisinart Mini Prep Plus DLC-2AC	50	2	3	63

# Lawn mowers

Report, page 34; Ratings, pages 36-37

Thirty-four of the 78 tested lawn mowers are available, including 19 of the recommended models.

Rec.	Rank	Brand & model	Price	Specs	Overall score
				Deck size (in.) Engine cc/ volts/amps	0 100 P   F   G   V   G   E

## A GAS SELF-PROPELLED, MULTI-SPEED Best for most lawns; these blend ease and performance.

✓	2	Toro 20381	\$620	21	159cc	82
✓	5	Toro Recycler 20333C	500	22	190	75
✓	6	Toro Recycler 20332C	460	22	190	73
✓	8	Craftsman 36208	430	22	190	65
	10	Troy-Bilt TB-350XP 12ALD37Q563	370	21	175	62
	12	Lawn-Boy 10607	380	20	149	61
	14	Snapper 7800696	460	22	190	61
	18	Troy-Bilt 12ALD37Q563	600	21	175	59
	23	Troy-Bilt 12A-B22Q563	450	21	161	57
	25	Husqvarna HD700L	370	22	161	57
	26	Snapper 7800264	315	22	190	50
	27	Snapper 7800829	410	22	190	48

## B GAS SELF-PROPELLED, SINGLE-SPEED Suitable for most lawns, but they sacrifice flexibility.

✓	1	Toro 20370	370	22	149cc	66
✓	2	Toro 20371	380	22	149	65
✓	3	Yard-Man 12A-18M7596	400	19	173	60
✓	4	Cub Cadet 12A-18M7596	400	19	173	59
✓	5	Cub Cadet 12A-E18M7596	450	19	173	56
	7	Lawn-Boy 10606	400	20	149	53

Rec.	Rank	Brand & model	Price	Specs	Overall score
				Deck size (in.) Engine cc/ volts/amps	0 100 P   F   G   V   G   E

## B GAS SELF-PROPELLED, SINGLE-SPEED continued

	8	Lawn-Boy 10605	\$380	20	149cc	52
	11	Craftsman 36219	380	22	190	48

## C GAS PUSH Fine for smaller, flatter lawns and for trimming larger ones.

✓	1	Cub Cadet 11A-18M7596	350	19	173cc	62
✓	2	Husqvarna 6021P	250	21	149	59
✓	3	Troy-Bilt TB-110 11A-A22Q563	390	21	140	59
✓	5	Lawn-Boy 10603	300	20	149	58
✓	9	Troy-Bilt 11A-EB27Q563	490	21	161	56
	13	Columbia 11A-B03K897	290	21	158	51
	15	Columbia 11A-A40M897	220	21	148	46

## D ELECTRIC BATTERY Best for lawns small enough to mow within 30- to 45-minute run time.

✓	1	Black & Decker SPCM1936	450	19	36V	61
✓	2	Black & Decker CM1936	400	19	36	59
✓	3	Black & Decker CMM1200	400	19	24	58
✓	4	Toro 20360	430	20	36	56
	5	Black & Decker CM1836	350	18	36	53

## E ELECTRIC CORDED Best for smaller, more open lawns where the cord isn't an issue.

✓	1	Black & Decker MM875	240	19	12A	56
	2	Black & Decker MM1800	200	18	12	49

☐ Self-propelled electric.

## Canada Extra on the Web

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

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**Government consumer offices**  
Here, federal and provincial offices that can help with a range of consumer concerns.

**Government safety offices**  
These offices handle consumer issues including product safety and bankruptcy.



# Lawn tractors & riders

Report, page 34; Ratings, page 39

Twenty-eight of the 41 tested tractors and riders are available, including 9 of the recommended models.

Rec.	Rank	Brand & model	Price		Specs		Overall score
			Machine	Bag/mulch kit	Deck size (in.)	Engine power (hp)	
						0	100
						P   F   G   VG   E	

**A LAWN TRACTORS** Best for most larger lawns; models with tighter turning are footnoted.

	1	Cub Cadet 14W-3GE-596	\$4,950	\$570/\$75	42	20	77
✓	2	Snapper 2691025	2,745	430/80	46	23	76
✓	5	John Deere D110	1,700	340/30	42	19.5	74
	6	Cub Cadet LTX1045 13AX91AT596	1,700	380/50	46	20	74
	8	Cub Cadet LTX1040 13AX90AS596	1,950	550/50	42	19	73
✓	10	Craftsman 60226 <sup>1</sup>	1,700	310/53	42	24	72
	16	Yard Machines 13AN78TS500	1,450	300/50	42	20	64
	17	Yard Machines 13AJ79TS500	1,650	400/50	46	22	62
	18	John Deere D100	1,500	420/90	42	17.5	62
	19	Craftsman 60133	1,050	310/53	42	17.5	56
	20	Yard Machines 13AM762F500	1,250	270/35	38	13.5	46

**B LAWN TRACTORS (WIDE DECK)** These offer wider cuts; models with tighter turning are footnoted.

✓	2	John Deere D140	2,000	350/35	48	22	69
✓	3	Craftsman 60269 <sup>1</sup>	3,000	410/53	54	26	68
✓	4	Craftsman 60268 <sup>1</sup>	2,100	410/53	54	26	68
	5	Husqvarna YTH22K48	2,000	370/50	48	23	64
	6	Cub Cadet LT1050 13AQ91AP596	2,500	400/75	50	25	64

Rec.	Rank	Brand & model	Price		Specs		Overall score
			Machine	Bag/mulch kit	Deck size (in.)	Engine power (hp)	
						0	100
						P   F   G   VG   E	

**C ZERO-TURN-RADIUS RIDERS** All turn tightly, but most can be hard to control on hills.

	1	Cub Cadet Z Force S 46 17AF5BHH010	\$4,600	\$400/\$50	46	20	76
	2	Cub Cadet RZT-S 17WF2B-DT010	3,500	400/50	42	22	75
✓	4	Toro TimeCutter SS4235 74627	2,900	500/140	42	20	71
	5	Cub Cadet RZT42 17AF2ACS596	3,000	400/75	42	22	71
✓	6	Husqvarna RZ4621	3,200	430/50	46	23	70
✓	7	Snapper 7800620	2,450	460/130	42	20	67
	9	Cub Cadet Z Force S 48 17AI5BHH010	5,000	350/200	48	22	64
	10	Cub Cadet RZT 50 17AI2ACP596	3,500	500/50	50	22	63
	12	Craftsman Colt 17AK2ACS599	2,900	500/50	42	19	56

**D REAR-ENGINE RIDERS** These are compact alternatives to tractors but give up some performance.

	1	Weed Eater One WE261	900	200/30	26	<sup>2</sup>	49
	2	Troy-Bilt TB300R 13AC26JD563	980	200/50	30	<sup>3</sup>	44
	3	Craftsman 28034	1,500	320/100	28	13	37

<sup>1</sup> Tighter turning than most lawn tractors. <sup>2</sup> 190-cc engine displacement. <sup>3</sup> 344-cc.

# String trimmers

Report and Ratings, page 40

**Recommended models only** From 60 tested.

Rec.	Rank	Brand & model	Price	Weight (lb.) <sup>1</sup>	Engine cc/amp/volt	Overall score
						0
						100
						P   F   G   VG   E

**A GAS-POWERED MODELS** These provide mobility and unlimited run time but require upkeep.

✓	1	Stihl FS 45	\$180	10.5	27 cc	81
✓	2	Stihl FS 40 C-E	230	11	27	81
✓	3	Echo SRM-225 <sup>2</sup>	290	12	21	80
✓	4	Stihl FS 56 RC-E <sup>2</sup>	300	12.5	27	78
✓	5	Echo GT-225 <sup>3</sup>	190	10	21	77

Rec.	Rank	Brand & model	Price	Weight (lb.) <sup>1</sup>	Engine cc/amp/volt	Overall score
						0
						100
						P   F   G   VG   E

**C CORDED ELECTRIC MODELS** These provide unlimited run time within range of a power outlet.

✓	1	Stihl FSE 60	\$130	8.5	5.3 amp	70
✓	2	Black & Decker GH1000	90	7.5	7.2	70

**D CORDLESS ELECTRIC MODELS** These offer push-button starts and easy upkeep but limited run time.

✓	2	Black & Decker NST1024 <sup>2</sup> <sup>4</sup>	180	9	24 volt	59
✓	3	Black & Decker NST2036 <sup>2</sup>	200	14.5	36	59

<sup>1</sup> Weight is to the nearest half-pound. <sup>2</sup> Straight shaft; others are curved. <sup>3</sup> Fixed-line head; others are automatic or bump-feed. <sup>4</sup> One line; others have two.

# Autos

Report, page 50; Ratings, page 52

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
SUBCOMPACT SEDANS								
Hyundai Accent	\$13,199-\$17,999	3.9	10.9	4.8	20.4	11.6	5.3	7.7
Chevrolet Sonic	14,495-21,870	3.4	9.9	4.3	19.7	12.1	6.2	8.3
Kia Rio	13,795-20,495	3.7	10.1	4.4	19.8	10.9	5.7	7.6
Nissan Versa	11,798-16,298	4.1	11.2	4.7	20.7	10.3	5.8	7.3
SUBCOMPACT HATCHBACKS								
Hyundai Accent	13,599-18,399	3.1	9.3	3.8	19.3	9.8	5.9	7.4
Kia Rio	14,095-20,795	3.8	10.5	4.5	20.1	11.2	6.3	8.1
Chevrolet Sonic	15,495-22,370	3.1	9.6	3.7	19.4	11.0	6.1	7.9
Toyota Yaris	13,999-19,990	4.0	11.5	4.6	21.1	10.2	5.8	7.4
SMALL CARS								
Subaru Impreza	19,995-28,095	3.9	9.7	4.1	19.7	11.8	6.7	8.7
Mazda3 i	15,795-32,235	3.7	9.7	4.1	19.6	10.8	5.4	7.4

## Contact info

How to reach manufacturers in Canada.

**Black & Decker**  
800-544-6986  
[www.blackanddecker.com](http://www.blackanddecker.com)

**Columbia (Yard Machines)**  
800-668-1238  
[www.yardman.ca](http://www.yardman.ca)

**Craftsman**  
Contact local Sears  
[www.sears.ca](http://www.sears.ca)

**Cub Cadet**  
800-965-4282  
[www.cubcadet.ca](http://www.cubcadet.ca)

**Cuisinart**  
800-472-7606  
[www.cuisinart.ca](http://www.cuisinart.ca)

**Echo**  
877-324-6660  
[www.echo.ca](http://www.echo.ca)

**KitchenAid**  
800-807-6777  
[www.kitchenaid.ca](http://www.kitchenaid.ca)

**Husqvarna**  
800-487-5962  
[www.husqvarna.ca](http://www.husqvarna.ca)

**John Deere**  
Contact local dealer  
[www.deere.ca](http://www.deere.ca)

**Lawn-Boy**  
800-526-6937  
[www.lawn-boy.com](http://www.lawn-boy.com)

**Magimix**  
800-424-6783  
[www.magimix.ca](http://www.magimix.ca)

**Ninja**  
800-798-7395  
[www.ninjakitchen.com](http://www.ninjakitchen.com)

**Snapper**  
800-472-7606  
[www.snapper.com](http://www.snapper.com)

**Stihl**  
519-681-3000  
[www.stihl.ca](http://www.stihl.ca)

**Toro**  
800-544-5364  
[www.toro.ca](http://www.toro.ca)

**Troy-Bilt**  
800-567-6775  
[www.troybilt.ca](http://www.troybilt.ca)

**Weed Eater**  
800-554-6723  
[www.weedeater.com](http://www.weedeater.com)

**Yard-Man**  
800-668-1238  
[www.mtdcanada.com](http://www.mtdcanada.com)