



YES OR NO? Taking multivitamins can help balance your diet, but you may not need them at all.

Multivitamins

Most we tested were fine, so select by price

SHOPPING FOR a multivitamin has crossed the line from being confusing to becoming mind-bending. On a recent visit to a CVS store in the New York City area, our reporter counted no fewer than 50 adult multivitamin/multimineral supplements (multivitamins, for short). One A Day is available in 15 formulations for everyone from teenage boys to women watching their “metabolism”; its competitor Centrum comes in nine versions.

If you think you can avoid the confusion by heading straight for the “silver” products marketed to seniors, think again: About a third of the CVS offerings targeted people in the 50-plus range, with formulations for men, women, and menopausal women, as well as the standard unisex formulas. And here’s a news flash: You may not even need them.

With all the choices, it’s no wonder half of multivitamin users in a new, nationally representative CONSUMER REPORTS telephone survey expressed some doubt that they were taking the right product for their needs. Our survey, which included 2,002 adults and took place in

April 2010, uncovered some other concerns, too: Fifty-six percent of respondents who took a multivitamin worried that it contained harmful ingredients, for example, and 47 percent expressed concern that their multivitamin didn’t contain the levels of nutrients listed on the bottle.

Our tests of 21 multivitamins at two outside labs—including leading brands, five for seniors, and six for children—will allay some of those fears. All but one of the products we tested met their label claims

DID YOU KNOW?

Food trumps pills

For people who don’t get all the vitamins and minerals they need from a healthful diet (the majority of Americans), a multivitamin may seem like a cheap, easy way to reap the same benefits. Trouble is, getting your nutrients from pills isn’t the same as getting them from food. That’s because fruits, vegetables, whole grains, and other plant foods contain thousands of beneficial plant substances called phytochemicals that interact with one another in myriad ways, some of which scientists may not even understand yet. The greater the food variety, the more numerous

for key essential vitamins and minerals, and none contained worrisome levels of contaminants such as arsenic or heavy metals. Most of the pills we tested also passed the U.S. Pharmacopeia’s dissolution test, which involves immersing them in a simulated stomach-acid solution to determine whether they’ll dissolve properly in your body. (The USP is an independent standards-setting authority for the drug and dietary supplement industries.)

What’s more, we found that store brands did just as well in our tests as national brands, at a lower price. The biggest winner: Costco’s Kirkland Signature, whose regular, “mature,” and children’s multis cost a nickel or less a day.

But many people taking the pills don’t need to. Despite their popularity—Americans spent almost \$4.7 billion on multivitamins in 2008, up from \$3.7 billion in 2003—there’s virtually no evidence that they improve the average person’s health.

Pros and cons of vitamins

Multivitamins are generally formulated to provide 100 percent of the recommended daily intakes of the essential vitamins and minerals, and smaller percentages of other nutrients. There are some people for whom a daily multi is clearly necessary:

Women who are pregnant, breast-feeding, or trying to conceive. Some pregnant women don’t get the recommended 400 micrograms of folic acid a day that helps prevent neural-tube defects in newborns. And women who are either pregnant or breast-feeding need higher levels of other nutrients, including calcium and iron. They should take a specially formulated prenatal multivitamin.

People on restricted diets. People consuming fewer than 1,200 calories per day or who are cutting out entire food

the potential beneficial interactions. Taking the vitamins and minerals out of food robs you of all those healthful interactions, not to mention fiber, a disease fighter in its own right. That may be why study after study of isolated, high doses of vitamins has found they failed to prevent cancer, dementia, heart disease, or type 2 diabetes, even though people who eat foods rich in those vitamins have lower rates of those diseases.

Bottom line. It’s better to get your nutrients from food.

groups (such as carbohydrates) may need supplementation. So do people who take certain weight-loss drugs, including the over-the-counter pill Alli, that inhibit the absorption of fat-soluble vitamins.

People with a condition that depletes nutrients. Those disorders include cancer, diabetes, and chronic gastrointestinal problems such as colitis and pancreatitis that impair absorption or digestion. But such people may require more absorbable forms and higher doses of certain nutrients than a multivitamin provides.

In addition, the body's ability to absorb two essential nutrients—vitamin D (from sunlight) and vitamin B₁₂ (from food)—diminishes with age. So people older than 50 often need to be sure they get 600 to 1,000 International Units of D and at least

2.4 micrograms of B₁₂. A multivitamin is one potential source of those nutrients, though some people might still need a separate vitamin D supplement (often combined with calcium) to reach the recommended levels.

Beyond that, the benefit of a daily multivitamin for the average person is murky, and getting murkier. Proponents of the pills say they provide a sort of nutritional insurance policy, filling in the gaps for nutrients that people can't or, more likely, simply don't get enough of through their diets. The problem is, there's virtually no evidence that shows that doing so actually improves health in populations that don't have high levels of nutrient deficiencies.

Large clinical trials have found that taking vitamins and mineral supplements, including multivitamins, doesn't lower the risk of disease compared with not taking a multivitamin. Most recently, researchers from the Women's Health Initiative, who tracked more than 161,000 women, concluded that women who took the pills had no lower risk of cancer, cardiovascular disease, or death from any cause over an eight-year period than those who didn't. In the Dietary Guidelines for Americans report released in June 2010, the Department of Agriculture says that daily multivitamin/multimineral supplements do not offer "health benefits to healthy Americans" and urges consumption of a balanced diet plus, when needed, supplements of nutrients like calcium, vitamin D, and B₁₂.

What's more, people who take vitamins seem to be the same ones who eat a healthful diet anyway—and thus have the least need for extra nutrients. In our survey, the small subset of respondents (about one-sixth) who ate five or more daily servings of fruits and vegetables had higher rates of multivitamin use than less healthful eaters. That echoes findings from large-scale observational studies that found that vitamin users tend to be the same people who eat well, exercise, and follow other health-promoting behaviors.

The tendency of health-conscious people to take vitamins has provided marketing fodder for vitamin manufacturers, says Irwin Rosenberg, M.D., senior scientist and director of the Nutrition and Neurocognition Laboratory at the Jean Mayer



MANY MULTIS One A Day comes in 15 formulations, covering teenagers to seniors.

USDA Human Nutrition Research Center on Aging at Tufts University. "The companies can say that people who take multivitamins are healthier, but that's a misrepresentation of the science," Rosenberg says. "It may be true that they're healthier, but the causal relationship between the multivitamins and the better health is questionable and unlikely."

A few studies suggest that multivitamins may even increase the risk of certain health problems. Most recently, a highly publicized Swedish study that tracked some 35,000 women over 10 years found that those who took multivitamins were slightly more likely to be diagnosed with breast cancer than those who didn't take the supplements. That doesn't mean the multivitamins increased the women's risk of cancer; it may be that the women who took them were less healthy in other ways that increased their likelihood of developing cancer. But it does add to the reasons to, when possible, get your nutrients from foods—many of which contain their own potent cancer-protective properties—and to get any nutrients you may need more of, like calcium and vitamin D, from supplements rather than from a multi.

How to choose

If you still decide to take a multivitamin, our tests show that you can get a good one for very little money. Use the Ratings, note the nutrient doses, and buy by price. In addition, follow these guidelines:

Avoid megadoses. In general, look for no more than 100 percent of the Food and Drug Administration's Daily Value of the essential vitamins and minerals (one exception is vitamin D, for which the DV is

BY THE NUMBERS

4%

Multivitamin users age 18 and older who take chewables.

37%

U.S. adults who take a multivitamin daily.

50%

Multivitamin users who are very confident they're taking the right product.

83%

Multivitamin users who say they have told their doctor they are taking one.

84%

People taking a multivitamin who cited staying healthy as a key factor in their decision to take one.

just 400 IU, less than what many people should take). Avoiding big doses is especially important with vitamin A: Just 200 percent of the DV of the retinol form, sometimes listed on labels as vitamin A acetate or palmitate, can increase the risk of birth defects and liver damage.

Look for products that don't exceed about 3,000 IU of vitamin A (2,300 IU for women), or 60 percent of the DV, ideally with at least a third from beta-carotene, the safer form of the vitamin. (Smokers shouldn't take beta-carotene because it may increase their risk of lung cancer.)

Ignore special claims and add-ons. Claims for benefits such as weight control or increased energy are generally unsubstantiated. Even if botanical ingredients, food extracts, and other substances like lutein and lycopene did have a benefit, the amounts in a multivitamin are probably too small to have any effect.

Consider a multivitamin geared to your age or gender. Men's and senior formulas usually don't contain iron, which is good because those groups generally don't need extra iron, and it can lead to organ damage in people with hemochromatosis, a genetic disorder that causes excessive iron buildup. Senior formulas may also contain more vitamin D. Women's vitamins may have some extra calcium, though rarely enough to meet the daily requirement without the need for a separate supplement.

Two that came up short

Whole Source Mature Adult (Rite Aid) and One Daily (The Vitamin Shoppe)

Samples of one of the three lots we tested of One Daily and samples of two lots of Whole Source Mature Adult failed to break down properly in our dissolution test. And samples of two of the One Daily lots contained less than 90 percent of their labeled level of vitamin A, considered the cutoff for an acceptable margin of error by the U.S. Pharmacopeia, which sets industry standards for dietary supplements.

Both products also exceeded the USP's upper limits for nutrients: One Daily contained more than 125 percent of its labeled calcium, while Whole Source had more than 125 percent of its labeled zinc and more than 165 percent of its labeled vitamin D. Those amounts don't pose a health risk, but they do raise concern about the products' quality. And at about 13 cents per day, they were the most expensive of all the multis we tested. There are better choices.



ADULTS



SENIORS



CHILDREN

Ratings Multivitamins

All met their claims. In order of price, within categories.

Product	Size (count)	Cost/month ¹	USP verified	USP claim
FOR ADULTS (tablets)				
Kirkland Signature Daily Multi (Costco)	500	\$0.90	•	
Equate Complete Multivitamin (Walmart)	130	0.92		•
Healthsense Advanced Formula Complete (Dollar General)	150	1.00		
Up and Up Advanced Formula (Target)	150	1.80		
Central-Vite with Antioxidants (Rite Aid)	130	1.84		
Spectravite Advanced Formula (CVS)	130	1.95		•
Centrum	130	2.07		
Advanced Formula A Thru Z Multivitamin/Multimineral Supplement (Walgreens)	150	2.15		
One A Day Maximum	100	2.51		
FOR SENIORS (50+) (tablets)				
Kirkland Signature Mature Multi (Costco)	400	0.95	•	
Equate Mature Multivitamin (Walmart)	100	1.20		•
Spectravite Senior (CVS) ²	150	2.30		
Centrum Silver ²	150	3.01		
FOR CHILDREN (chewable tablets)				
Kirkland Signature Sugar Free Children's Chewable Complete Multivitamin (Costco) ³	300	1.59	•	
Equate Children's Multivitamin Complete (Walmart)	150	1.80		
Up & Up Children's Multivitamins (Target)	150	1.83		
Children's Chewable Complete Animal Shapes (CVS)	150	2.51		
Children's Chewable Vitamins (Rite Aid)	60	2.91		
Flintstones Complete	150	3.10		

¹ Cost per month was calculated based on manufacturer's recommended daily dose for adults and children 4 years and older, and the approximate retail price of the package size listed. ² Cap is not child-resistant. ³ Does not contain iron.

Guide to the Ratings

All of the products met their claimed levels of vitamins A, C, D, and E, folic acid, riboflavin, calcium, iron, and zinc; lacked worrisome levels of heavy-metal contaminants; and dissolved adequately in the U.S. Pharmacopeia (USP) test. All had a safety seal on the mouth of the bottle and, unless otherwise noted, a child-resistant cap. Unless otherwise noted, all adult and children's formulations contain iron; the senior formulations do not. **USP verified** indicates that a product has been verified for purity, strength, safety, dissolvability, and manufacturing quality by the USP, an independent standards-setting authority for the drug and dietary supplement industries. **USP claim** indicates that the manufacturer claims the product was made to one or more of the USP's quality standards or specifications, but the claim is not vetted by the USP. The verification seal holds more weight than a USP claim on the label, which several of the other products we tested had.