

# Vitamin supplements versus a balanced diet? No contest

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Global consumers spent more than \$177 billion dollars on dietary supplements in 2023, with at least a quarter of that—roughly \$45 billion or more—purchased by Americans, according to a study by Grand View

Research, a U.S.-based research and marketing firm.

Those numbers are expected to keep mushrooming over the next decade due to a surge in individual nutritional awareness and an aging population.

Approximately 59 million Americans use some type of vitamins or supplements regularly, spending an average of \$510 annually, according to [greatgreenwall.org](http://greatgreenwall.org).

They are everywhere: Gummies, protein shakes and other myriad supplements that increase a body's supply of critical vitamins and minerals.

However, most of us don't even need those supplements—especially if we concentrate on eating a [balanced diet](#) daily, according to Dr. Matthew Silvis, vice chair of clinical operations for Penn State Health Family and Community Medicine and medical director of primary care sports medicine for Penn State Health.

## **Get your fruits and vegetables**

Remember that "healthy food pyramid" poster from elementary school? Follow that, and many Americans could pocket what they would spend annually in over-the-counter supplements.

"For most people, they don't need multivitamins or supplements. If you have a well-balanced diet and you're able to eat nutritious foods—fruits, vegetables, etc.— you don't need a multivitamin or a supplement," said Silvis. "The broad answer is most people don't need them, despite the multibillion-dollar industry that the vitamin industry is. But there are populations of individuals who do need to consider a multivitamin or a supplement. And that is individualized."

Examples of those include [pregnant women](#) who may need more folic acids than they would get in their normal diets; osteoporosis patients who could benefit from calcium and Vitamin D; and vegans or those suffering from Celiac disease who may need a multivitamin containing a combination of supplements such as iron, B12, Vitamin D, copper and zinc.

## **More isn't necessarily better**

It's best, Silvis said, to discuss your options with a physician before spending money on vitamins and supplements. If your body doesn't need a particular supplement, it will simply get rid of it, and the money you spend will go down the toilet.

"If you have a well-balanced diet, well, you just literally urinate out the vitamins and minerals that you are taking with the multivitamin," Silvis said. "You can only absorb so much, and once you are past that limit, you just excrete the vitamin.

"So, the mentality that, 'if something is good, more must be better,' is not true. And you can end up creating problems if you are taking too much of certain vitamins."

Excess Vitamin A, for instance, can lead to a toxicity known as hypervitaminosis, which could trigger serious issues, such as vision and skin changes, bone pain and potentially liver damage.

## **But what about Vitamin C when you're sick**

Perhaps the most widely accepted supplement is Vitamin C, which is reputed to ward off colds or to at least expediate recovery when a patient is suffering through head and chest congestion.

Silvis said there's no empirical proof that Vitamin C has any pre-emptive power; whether it can assist in speeding recuperation is inconclusive.

"There's a lot of debate about whether or not Vitamin C actually changes how long you are going to have your illness," Silvis said. "But as with other vitamins, if you have a healthy, well-balanced diet with fruits and vegetables, you'll meet your dietary needs day to day."

Although ingesting too much Vitamin C is not nearly as dangerous as an excess of Vitamin A, it could cause gastrointestinal discomforts such as nausea, diarrhea and vomiting, Silvis said.

## **The case for athletes**

Another reason for the rise in global supplement consumption is the unrivaled market saturation that has occurred in the past two decades with athletic-enhancement products such as creatine, protein shakes and amino acids.

For high-intensity athletes who participate in draining workouts, using certain supplements makes sense, said Silvis, who has served as team physician for the Hershey Bears minor-league hockey franchise for 16 years.

"Professional hockey players burn an incredible amount of fuel on a day-to-day-to-week basis. We look at their protein intake and they can't possibly eat enough chicken and steak and protein to make up for those losses and we can't have them losing muscle mass," Silvis said. "They often supplement with protein shakes, because that is a quick, easy way for them to maintain their protein intake."

But that doesn't mean that everyone participating in athletics must supplement their workouts — especially if they are eating balanced

meals.

"Do all athletes need to take protein shakes? Absolutely not," he said. "Your child on a T-ball team does not need a protein shake."

## **Make sure it's safe**

If a patient is intent on using [dietary supplements](#), they should at least make sure what they are ingesting is as safe as possible. There are two important and easy ways to do that, Silvis said. When shopping for vitamins, look for the United States Pharmacopeia verified mark on products, ensuring what's on the label is actually in the product and at the potency and amounts specified.

With sports performance enhancers, only purchase products that have been certified by the NSF Certified for Sport, a nonprofit that requires strict standards for certification, including confirmation that a product does not contain any harmful contaminants not listed on the label such as traces of anabolic steroids.

"Those are the checks and balances that you can provide patients. Because there are walls and walls and rows and rows of options when you go to the store," Silvis said. "So, if you don't arm the person with the knowledge of what to look for, both in terms of the content of the vitamin or supplement and to make sure that it's going to be safe for the patient, then I don't think I've done my job."

Provided by Pennsylvania State University

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