

Why vitamin D matters during cancer treatment

Vitamin D may be best known for keeping bones strong, but it can also play an important role in supporting the body during cancer treatment.

Jeanna Brouwer, an outpatient oncology dietitian with the OSF HealthCare Cancer Institute, says understanding your vitamin D levels is one of the first steps in supporting your overall health during treatment. She emphasizes that vitamin D, a fat-soluble vitamin, helps support bone health, immune function and recovery, making it a crucial part of cancer care.

"It's a pre-hormone, or a precursor to a hormone, that is like a 'master key in our body,'" Brouwer says, adding it helps regulate many important processes inside of you.

There are two forms of vitamin D: D2 and D3. Brouwer says the body utilizes vitamin D3 more efficiently than vitamin D2. Vitamin D3 is naturally found in animal-based foods, including fatty fish, and is generally more effective than vitamin D2 at raising and maintaining vitamin D levels.

Why vitamin D is important during cancer treatment

Brouwer says vitamin D is almost always a beneficial part of a person's cancer journey. If someone hasn't had a recent vitamin D blood test, she recommends having one ordered so a baseline can be established before determining whether a supplement is needed.

"When we're deficient, our body isn't functioning to the ideal level that we need it to," Brouwer says. "We don't have the ideal immune system that can help us during cancer treatment. So, if we're deficient, we want to start there and bring it up to a healthy level."

Brouwer also says studies show an association between adequate vitamin D status and better outcomes in certain cancers.

For some people, supplementation becomes even more important depending on their diagnosis and treatment plan.

"So, for example, prostate cancer patients; if you get put on something called ADT therapy, where it's blocking testosterone, that's going to alter our bone health. So, anybody put on that medication oftentimes (recommended by their oncology team) start supplementing with vitamin D and calcium," Brouwer says.

Supplementation can also help protect against osteopenia and osteoporosis.

People with pancreatic cancer can face a different challenge. Brouwer says pancreatic insufficiency can prevent the body from properly breaking down fat, leading to malabsorption. Because vitamin D is a fat-soluble vitamin, traditional vitamin D supplements may be less effective for some patients.

Choosing a supplement

Although sunlight helps the body produce vitamin D, Brouwer says supplements are an excellent way to get the nutrient without spending long periods of time in the sun, which can increase the risk of skin damage and skin cancer.

She also understands that choosing the right supplement can be overwhelming.

In general, Brouwer recommends choosing vitamin D3 over D2. She says products containing vitamin K2 can also help direct calcium into the bones more effectively.

People should keep in mind that the amount of vitamin D found in many calcium supplements or multivitamins is often not enough to meet their daily needs.

Most people need between 1,000 and 2,000 international units (IU) of vitamin D each day, Brouwer says. Reaching that amount through food alone can be difficult. For example, it would take about 10 glasses of milk a day to provide that much vitamin D, which is not recommended.

For people taking multiple medications, pill burden is a real concern. Brouwer says liquid-filled or gel capsules are often easier to swallow. Vitamin D also comes in gummies which are more palatable for some people.

Some formulations may also improve absorption. Liposomal supplements contain fat, which helps the body absorb vitamin D more effectively. For people who have difficulty absorbing vitamin D through the digestive tract, such as some pancreatic cancer patients, liquid drops may be a better option.

"Doing a sublingual bypass anything in the gut area. You hold the liquid under your tongue for 30-60 seconds, and it's going to absorb into the tissue in the oral cavity," Brouwer says. "So, if you get drops that are liposomal, best of both worlds."

Look for third-party testing

Because dietary supplements are not regulated by the U.S. Food and Drug Administration (FDA), Brouwer encourages people to look for products that have undergone independent, third-party testing.

She recommends looking for certifications such as USP (U.S. Pharmacopeia) or NSF (National Sanitation Foundation) on the label to help verify a supplement's quality and contents.

Before starting any vitamin D supplement, talk with your oncology care team or health care provider. There are scenarios, such as high calcium levels caused by cancer, where taking supplemental vitamin D can be problematic. A simple blood test can determine whether you're deficient and help identify the supplement and dosage that's right for you.