

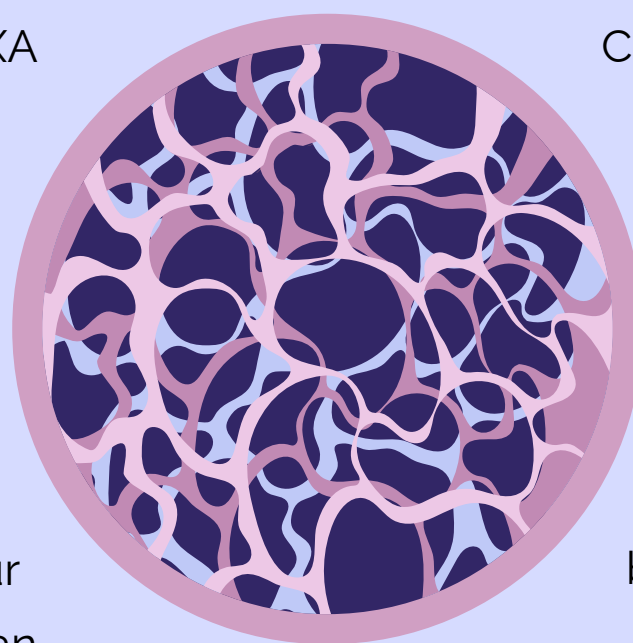
How Do Hormones Affect Osteoporosis?

It's important to understand how you become more vulnerable to osteoporosis as you age



Women typically begin experiencing **bone loss** during the first few years of menopause, which for most women is in their early 50s — but Mindy was in her early 30s when she got her diagnosis.

Six months after Mindy completed treatment for breast cancer, her doctor ordered a DEXA scan (a medical imaging test used to determine bone density) and Mindy was shaken by the results: She had osteopenia. Osteopenia is a condition where you have some bone density loss but not as much as with full-blown **osteoporosis**, a disease that causes your bones to break easily. But osteopenia can eventually lead to osteoporosis. "I was shocked and saddened to learn of this new diagnosis," Mindy said. "I had just been declared cancer-free and now I had a new medical condition to navigate."



Nearly half of all women ages 50 years and older will have an osteoporosis-related fracture in their lifetimes. As of 2020, 5.3 million Americans ages 50 and above had **osteoporosis**, and 80% of the cases occurred in women. According to **Dr. Janet Rubin**,

an endocrinologist at the University of North Carolina School of Medicine, osteoporosis is a condition most women will develop as they get older. In Mindy's case, though, she began developing bone loss earlier than most women because her medical history included a **secondary cause of osteoporosis**: breast cancer treatment.

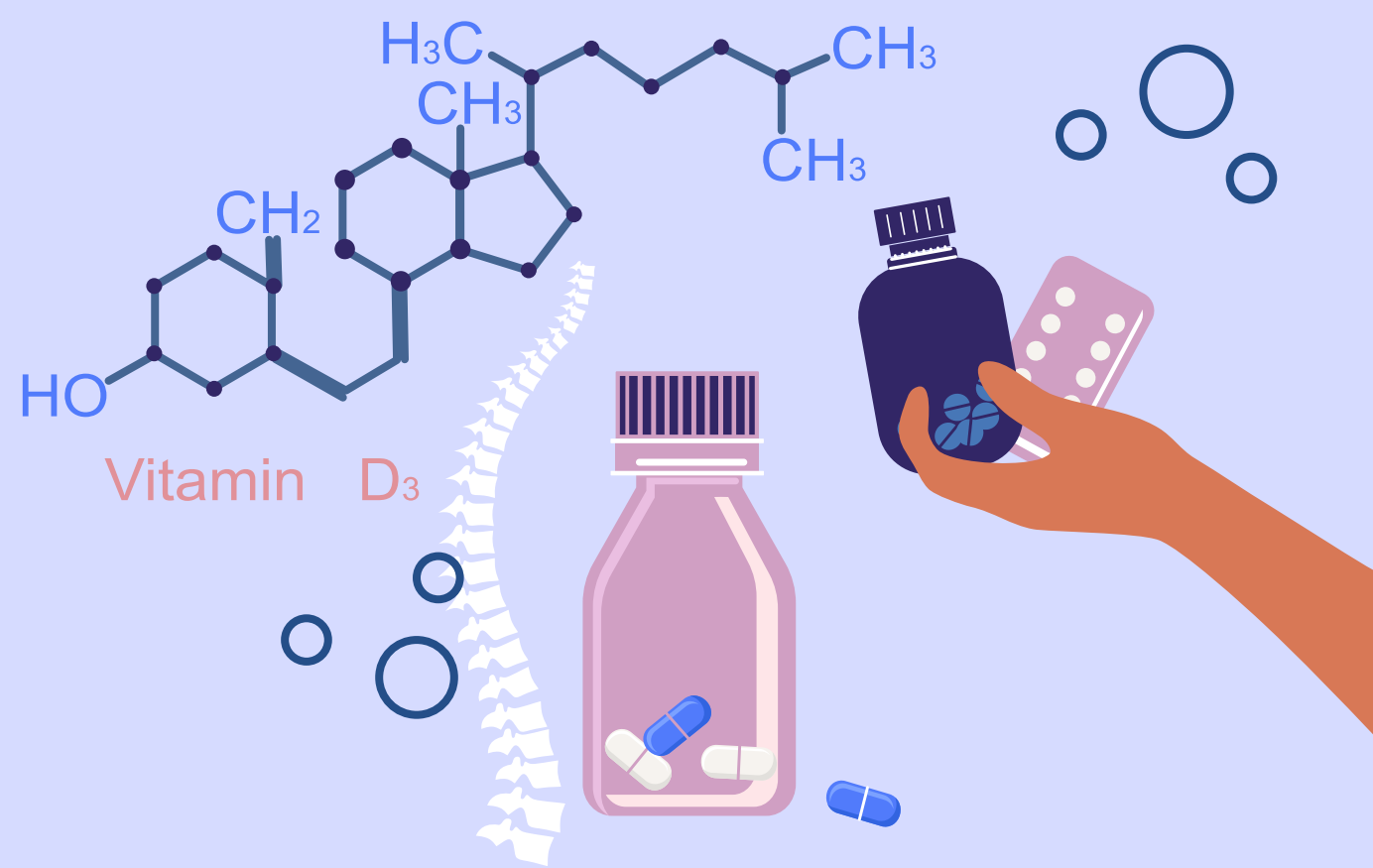
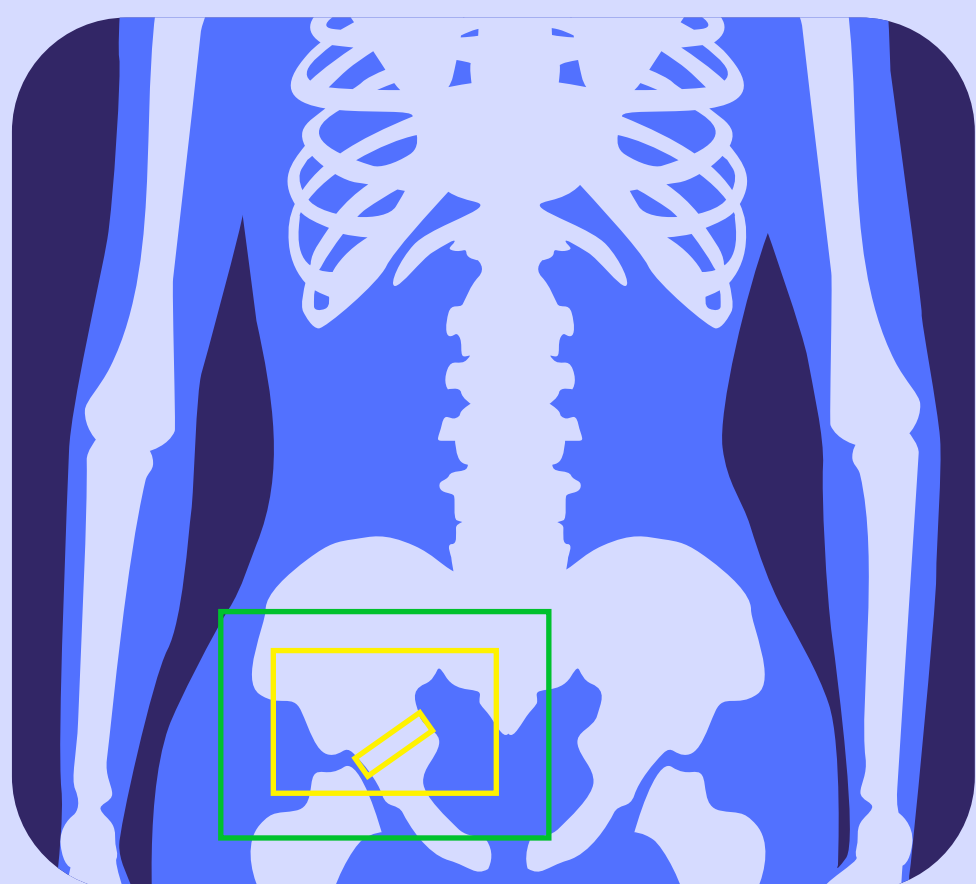
Mindy's breast cancer treatment plan was aggressive. It included, among other things, five years of taking an **aromatase inhibitor pill**. Because her tumor was hormone-receptor-positive, which

means that it was fueled by her body's own estrogen, Mindy's doctors put her into medically induced menopause. Aromatase inhibitors can help decrease the recurrence of breast cancer, Rubin told HealthyWomen, but because they block estrogen production, they also contribute to bone loss, which can lead to osteoporosis.

After her initial bone density scan, Mindy was referred to an endocrinologist, who explained that estrogen plays a key role in building and maintaining a healthy bone density level. The endocrinologist told Mindy that her years of ovarian suppression likely played a huge role in the thinning of her bones.

Although Mindy's osteopenia has developed into the early stages of osteoporosis in the years since that first bone scan, she has been able to **slow the onset of the disease** by taking calcium and vitamin D3 supplements and doing moderate weight-bearing exercise several times weekly.

Rubin said that all women, regardless of their risk of osteoporosis, should exercise regularly because that can protect against fragility fractures, which occur from minimal trauma, such as a fall from a standing height.



Sufficient vitamin intake, such as vitamin D and calcium, is also linked to maintaining bone mineral density, which lowers the risk of developing osteoporosis. Luckily, there are medicines for osteoporosis that can be used as well.

A number of hormones play a role in regulating your bone-density and hormone-level changes as you age. As women move into **menopause** and postmenopause, for example, their estrogen production decreases, which leads to a loss in bone density and increases their risk of developing osteoporosis. For some women, such as those like Mindy who have a history of breast cancer and have taken drugs that suppress their estrogen production, that risk can come earlier than the average age of 65. **Other secondary causes** include **eating disorders**, gastrointestinal and endocrine disorders. According to Rubin, the main risk factor for osteoporosis, though, is your genes: "Your bone density is mostly controlled by your genetics."

But even if you don't have a family history of osteoporosis or a history of any of the secondary causes of osteoporosis, Rubin said it's important for women to ask their doctors for a bone density scan as they near the age of 65. Anyone who has had a fragility **fracture** or spinal fracture should also get evaluated for osteoporosis.