Cancer Treatment

Maintaining Bone Health

Living with cancer can have detrimental effects on bone health, leading to pain, impaired mobility and increased risk of fractures. But there are ways to prevent and manage bone problems to help maintain a good quality of life.

Bone contains two main types of cells: osteoblasts, which build new bone, and osteoclasts, which dissolve old bone. When bone is broken down faster than it can be produced, the result is low bone mineral density, known as osteopenia, or its more severe form, osteoporosis.

Cancer can tilt the balance toward bone breakdown, making bones more susceptible to fractures. This can release excess calcium into the bloodstream, a condition known as hypercalcemia of malignancy. Women, older people and those with low body weight are more prone to bone loss.

Cancers that originate in the bones, such as osteosarcoma and chondrosarcoma, are rare in adults. More often, cancer arises elsewhere—such as the breast, lungs or prostate—and spreads to the bones, a process known as metastasis. Multiple myeloma, a blood cancer that affects the bone marrow, often causes bone damage and fractures.

Even cancer that does not affect bones directly can contribute to bone problems. Some chemotherapy medications and corticosteroids, like dexamethasone and prednisone, can harm the bones. Hormone therapy that lowers estrogen or testosterone production can cause bone loss. Nausea and lack of appetite can lead to a diet low in calcium and vitamin D, and prolonged inactivity due to illness weakens the bones.

Preserving Bone Health

Bone loss usually happens slowly and symptoms may not occur until later stages. To catch problems early, experts recommend regular DEXA bone density scans and tests to measure calcium, vitamin D and bone biomarker levels.

Lifestyle changes and medications can help prevent or reverse osteoporosis. Eat a healthy diet that includes foods rich in calcium and vitamin D. Good sources of calcium include milk, cheese and other dairy foods, leafy green vegetables, soybeans and tofu, fish with edible bones (like sardines), almonds, dried figs and fortified products such as breakfast cereals. Your skin makes vitamin D when exposed to sunlight, but deficiency is common. Ask your doctor if you could benefit from supplements. Avoid smoking and limit alcohol consumption, which can harm the bones.

Physical activity, especially weight-bearing activities such as walking, promotes bone production. Exercises like tai chi and yoga improve strength and balance, reducing the risk of falls. At home, prevent falls by removing clutter and loose rugs, wearing supportive, properly fitting shoes and installing handrails.

Bone-modifying medications, including the bisphosphonates Aredia (pamidronate) and Zometa (zoledronic acid) and the RANKL inhibitor Xgeva (denosumab), strengthen bones by inhibiting osteoclast activity. Some research suggests they may also help prevent bone metastasis. Pain relievers, radiation therapy and chemotherapy can often help control bone pain.

Don’t wait until bone problems become serious. Work with your medical team to develop a plan to prevent or manage bone complications.

For more information about bone health, see the following resources:

American Society of Clinical Oncology: Osteoporosis

American Bone Health

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http://beta.docker.cancerhealth.com/basics/health-basics/maintaining-bone-health