



Impact of Declining Estrogen levels in Menopausal Women

Maithili A Athavale*

Assistant General Manager (R&D), Cancer Biology Lab, (A Unit of Godavari Biorefineries Ltd.), MIDC Mahape, Navi Mumbai, India

*Corresponding Author: Maithili A Athavale, Assistant General Manager (R&D), Cancer Biology Lab, (A Unit of Godavari Biorefineries Ltd.), MIDC Mahape, Navi Mumbai, India.

Received: December 01, 2025

Published: December 04, 2025

© All rights are reserved by **Maithili A Athavale**.

How estrogen affects women's bones, muscles, and joints

Estrogen is a key hormone that helps keep a woman's bones, joints, and muscles healthy. It also plays an important role in repairing tissues after an injury.

What happens when estrogen levels drop?

As women reach menopause, the level of estrogen in the body naturally declines. This drop in estrogen can have a big impact on the musculoskeletal system—the network of bones, muscles, and joints that keeps us moving.

With less estrogen, sprains and strains may take longer to heal, and the body can become more prone to inflammation, stiffness, and muscle pain. Estrogen also helps regulate the stress hormone cortisol. When estrogen levels go down, cortisol levels can rise, making muscles feel tense, sore, or achy.

It's common for women to notice more aches and pains during menopause for these reasons.

Can low estrogen cause bone loss?

Yes. A decline in estrogen levels can lead to loss of bone mass. In fact, women can lose about 10% of their bone density within the first five years after menopause. This increases the risk of osteoporosis, a condition where bones become thinner, weaker, and more likely to break.

How to support your body during this phase

The good news is that there are many ways to help your body stay strong and healthy through menopause:

- Stay active with gentle exercises such as walking, swimming, yoga, or stretching. These keep your muscles strong and your joints flexible.
- Get enough calcium and magnesium. During menopause, your body needs more of these minerals — about 1000–1200 mg of calcium and 320 mg of magnesium each day.
- Eat foods rich in phytoestrogens, such as flaxseeds, soybeans, and sprouted legumes. These plant-based compounds can help ease menopausal symptoms naturally.
- Manage stress and get good sleep. Relaxation techniques, mindfulness, and a healthy sleep routine can help balance hormones and reduce body tension.

Listening to your body

Every woman's body is unique. Paying attention to what your body needs — in terms of diet, exercise, rest, and stress management — can help you create the right balance to move through menopause smoothly and confidently.