



## Triclosan and Osteoporosis

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A study has found that **women exposed to triclosan**, a chemical widely used as an antibacterial in soaps, toothpastes and other personal care products, **are more likely to develop osteoporosis**.

### Triclosan (TCS)

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- Triclosan is a broad-spectrum **antimicrobial agent** that is frequently used in pharmaceuticals and personal care products.
- When one uses a product containing triclosan, one can absorb a small amount through one's skin or mouth.
- Triclosan added to toothpaste has been shown to **help prevent gingivitis**.

**Gingivitis** is a common and mild form of **gum disease** that causes irritation, redness and swelling (inflammation) of gingiva, the part of gum around the base of teeth.

- **Concerns:**

- Some short-term animal studies have shown that exposure to high doses of triclosan is associated with **a decrease in the levels of some thyroid hormones**, thus making triclosan an **endocrine disruptor**.

**Endocrine disruptors** are chemicals that may interfere with the body's endocrine system and produce adverse developmental, reproductive, neurological, and immune effects in both humans and wildlife.

- Some other studies have raised the possibility that exposure to triclosan contributes to **making bacteria resistant to antibiotics**.
- Laboratory studies have demonstrated that triclosan may have potential to adversely **affect bone mineral density** in cell lines or in animals.
- Also, there is still no evidence that triclosan in consumer antibacterial soaps and body washes provides any benefit over washing with regular soap and water.

### Osteoporosis

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- Osteoporosis, which literally means porous bone, **is a disease in which the density and quality of bone are reduced.**
- **Occurrence:** Bone is living tissue that is constantly being broken down and replaced. Osteoporosis occurs when the creation of new bone doesn't keep up with the loss of old bone.
- **Impact:** As bones become more porous and fragile, the risk of fracture is greatly increased.
- **Symptoms:** Often there are no symptoms until the first fracture occurs as the loss of bone occurs silently and progressively.
- **Diagnosis: A bone mineral density (BMD) test** measures how much calcium and other types of minerals are in an area of a bone. This test helps health care provider detect osteoporosis and predict the risk for bone fractures.
- **Prevention:** Good nutrition with adequate calcium, protein, and Vitamin D as well as regular exercise can help in keeping bone healthy throughout the life.

### **Why women are more likely to get osteoporosis than men?**

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- Women tend to have **smaller, thinner bones than men.**
- **Estrogen**, a hormone in women that protects bones, **decreases sharply** when women reach **menopause.**