

Editorial**Calcium and Parathyroid Hormone****Dr. Mohsin Masud Jan**

Editor

Women who supplemented their diets with modest amounts of calcium had a lower risk for the hormone disorder known as primary hyperparathyroidism.

The study, which is published in BMJ, also found that women with diets low in calcium may be more likely to get the disorder, which erodes bones and potentially sets the stage for depression, fatigue, and kidney stones. The research may be a reason to revisit the idea of taking a daily calcium supplement. Many women shelved their calcium pills last year after an expert panel concluded they don't prevent osteoporosis-related fractures, at least in postmenopausal women. Recent studies have also tied calcium supplements to a higher risk of heart attacks and strokes.

For example, a 2010 report on dietary calcium by the Institute of Medicine concluded that most healthy adults don't need supplements because national surveys show average intakes are adequate. The problem here is that the average is not exactly what everybody gets. To take a supplement of about 500 milligrams a day, that amount makes up the difference.

The Institute of Medicine recommends that nearly all adults get 1,000-1,200 mg of calcium a day to meet their daily needs for strong bones. For the new study, researchers tracked more than 58,000 women taking part in the long-running Harvard Nurses' Health Study. Every four years, the women were asked about their diets and overall health. Over the 22 years of the study, 277 women were diagnosed with primary hyperparathyroidism.

In hyperparathyroidism, the parathyroid glands release excess hormones that pull more than the needed amount of calcium out of the bones and then deposit it into the blood. Diets low in calcium may chronically stimulate the parathyroid glands, which normally work like thermostats. When calcium levels dip, they effectively "turn on" and pull calcium from bone. When

there's enough calcium coming in through food and other sources, they shut off. Their job is to keep calcium levels stable.

The high blood calcium caused by hyperparathyroidism can cause trouble with the body's electrical system so that people become tired, fatigued, depressed. They get bad osteoporosis. Calcium collects in their kidneys and causes kidney stones.

Hyperparathyroidism often goes unrecognized because doctors aren't used to looking for it. Hyperparathyroidism affects about 1 in 800 people, but it's more common as we age and especially in postmenopausal women. One in 250 women over age 55 will get a parathyroid tumor in her lifetime. Previous studies have suggested that when the parathyroid glands are overworked because of low calcium, they may go haywire and lose their ability to shut off.

This study is the first to look at the relationship between calcium intake and hyperparathyroidism. When researchers divided women in the study by their average calcium intakes, they found those with the highest calcium intake had the lowest risk for developing hyperparathyroidism. That was true even after researchers adjusted their results to eliminate the influence of a variety of things that can raise a person's risk for hyperparathyroidism, like age, body weight, taking in other nutrients like vitamins A and D, and protein, and smoking and drinking alcohol. What's more, women who supplemented their diets with at least 500 mg of calcium a day had a 40%-70% reduced risk of being diagnosed with the disease compared to women who didn't take calcium supplements. Women who have questions about the risks and benefits of taking calcium supplements should talk to their doctors. Ultimately, more research is needed to know if the benefits of supplements will outweigh any risks.