

CAL-EZ Absorption Clinical Study

Calcium is the most abundant mineral in our bodies. However, for many people with common health conditions like osteoporosis or malnutrition, or rare diseases like hypoparathyroidism, taking daily calcium is a way of life. Recently, an important clinical study comparing a powdered calcium carbonate versus tablet calcium citrate was examined in healthy women in order to see which one was more absorbable. Not surprisingly the powder was absorbed over 50% more quickly than the tablet form. Below is a brief background and study results.

How the study was performed

The study design called for twenty-five healthy, premenopausal women to take calcium citrate tablets (Citrical brand) or calcium powder (Cal-EZ brand) on two separate occasions. Informed consent was obtained from the volunteer participants. The participants were instructed to adhere to a low calcium diet for 7 days prior to the initial blood analysis.

The night before the study visit, all women fasted for 12 hours and were limited to water. When they woke up they had a light, calcium-free breakfast, then were also instructed to take either Citrical or Cal-EZ. They were able to drink water and coffee (without milk) for the next four hours while blood and urine were collected at baseline, 1, 2, and 4 hours.

Study results

Twenty-three women with an average age in their mid-thirties were recruited and enrolled into the study. After analysis of blood and urine samples, results showed that the administration of a single serving of Cal-EZ resulted in both more calcium absorbed and quicker absorption than when the same women took Citrical. The method of calcium absorption was measured by a calculation which showed more Cal-EZ was absorbed at all time points (1, 2, and 4 hours) after ingestion versus Citrical. The time for Cal-EZ to be absorbed was 2.63 (+/- 1.24) hours versus Citrical which was 3.23 (+/- 1.32) hours, a statistically significant difference ($P=0.0036$).

The study was well controlled because the participants had limited dietary calcium intake for at least one week prior to testing. There were no serious adverse events in either group. No gastrointestinal side effects were reported in women taking Cal-EZ. Finally, no one complained about the taste of Cal-EZ, which was easily mixed into a beverage or sprinkled on food. Conversely, a few patients commented about large tablet size with the calcium tablets.

Conclusions

This study clearly showed that the calcium-carbonate powder, Cal-EZ, was not only more absorbable but more quickly absorbed versus its competitor product (calcium citrate tablet).

The study was recently published in the peer-reviewed journal, Food & Nutrition Research, please click here to access at the National Library of Medicine website, PubMed:

<http://www.ncbi.nlm.nih.gov/pubmed/24772062>

