Towards an optimal strategy for optimal vitamin D fortification

Results in Brief

Getting vitamin D from bread

A study was conducted on enriching bread with vitamin D in order to improve the intake of this important supplement which tends to be limited in Northern countries during winter.

Among its numerous benefits, vitamin D is known for keeping joints and bones healthy since it assists in the body's absorption of calcium. It is a vitamin produced naturally by the body, but in order for this to occur, an adequate amount of sunlight exposure is necessary. Northern countries lack sunlight during winter months, which can lead to a deficiency in vitamin D.

In light of this, a supplement intervention is necessary. Thus, a study was conducted on vitamin D fortified bread as a means of addressing this deficiency. Fortified wheat and rye bread were baked with the addition of vitamin D in a water soluble powder of approximately 12 microgram/100g baked bread. Chemical analysis revealed that
vitamin D was evenly dispensed in the bread and did not disappear during baking.

The study took place in Finland during three weeks in February-March. Four groups of healthy women were tested for the bioavailability of vitamin D in bread. Each day group one received 85g fortified wheat bread, group two received 85g fortified rye bread and group three received 85g unfortified wheat bread. The fourth group received the same as group three in addition to a 10 microgram vitamin D tablet.

The results of the study showed that control group three was the only one showing no improvement. This indicates that vitamin D can be distributed evenly in bread and also that it is stable and bioavailable. Hence, vitamin D fortified bread is a safe, viable way to increase vitamin D status equally across all population groups.

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