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Nutrition - Lactation

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Bovine beta casomorphin 7 (BCMb-7) is an opioid peptide that increase the risk to develop cardiovascular disease, type 1 diabetes, sudden infant death syndrome, autism and schizophrenia. It has been found in milk, cheese, yogurt and some biological samples such as infant's blood, urine from autistic children and human milk. The aim of this cross-sectional study was to investigate whether dairy food intake is associated with the presence of BCMb-7 in breast milk in Mexican women. Three human milk samples from 78 women from a rural area in Querétaro Mexico were obtained between 3 and 16 weeks postpartum. BCMb-7 was determined by Ultra Performance Liquid Chromatography Mass Spectrometry (UPLC-MS). Dairy food intake was evaluated using three 24 hr-recalls and a food frequency questionnaire. Intake of dairy food evaluated included whole milk, different types of cheese and yogurt. All women consumed any dairy products at least once a day. BCM-7 concentration in mature human milk was 0.84±1.01 ng/mL. Women had a total protein intake of 68.5 ± 21 g per day. Women with higher protein intake from dairy food (>40g) had significantly higher concentration of bovine BCMb7 (> 0.90 ng/mL) compared with women with lower protein intake from dairy food (<33g) (p = 0.029). For every 10 grams of dairy protein consumed, the probability of increasing the concentration of BCMb-7 increased 1.18 times (p=0.034). In conclusion, high intake of dairy food increases the concentration of BCMb-7 in human milk in Mexican women.

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