

## عنوان مقاله:

Evaluation of Lead and Cadmium levels in breast milk in Sanandaj, Iran

## محل انتشار:

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## خلاصه مقاله:

Although breastfeeding is the main nutrition source of infants, it could also be a source of exposure to toxic metals. The present study aimed to evaluate the levels of lead (Pb) and cadmium (Cd) in breast milk, investigate the effects of some sociodemographic parameters on these concentrations, and assess the correlations between these metals and infant growth. Breast milk samples (20-30 ml) were obtained from 100 women in the second month postpartum. Pb and Cd levels were determined using inductively coupled plasma mass spectroscopy (ICP-MS). Mean concentration of Pb in the samples was 6.8 mg/l, and the concentration of Cd in the collected breast milk was lower than the limit of detection (0.1 mg/l). In 74% of the samples, Pb level was higher than the recommended limit by the World Health Organization (2-5 mg/l). In addition, mean weekly intake of Pb (6.65 mg/kg/week) and Cd (0.098 mg/kg/week) was lower than the tolerable weekly intake for infants. No correlations were observed between the Pb concentration in breast milk and the weight, length, and head circumference of infants at birth and after two months. According to the results, exposure to Pb exceeded the standard limit in the infants in the present study. Therefore, it is recommended that breast milk monitoring programs be conducted on larger sample sizes longitudinally.

## کلمات کلیدی:

Lead, Cadmium, Breast Milk, Infants, Sanandaj

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