

## Brazilian Oral Research

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### Abstract





[PICOLI, Lara Cristina](#) et al. Effect of cadmium on the floor of the mouth on rats during lactation. *Braz. oral res.* [online]. 2004, vol.18, n.2, pp. 105-109. ISSN 1806-8324. doi: 10.1590/S1806-83242004000200003.

Cadmium (Cd) present in the air, drinking water and food has the potential to affect the health of people, mainly those who live in highly industrialized regions. Cd affects placental function, may cross the placental barrier and directly modify fetal development. It is also excreted into milk. The body is particularly susceptible to Cd exposure during perinatal period. The effect on rat oral epithelium (floor of the mouth) after continuous exposure to drinking water containing low levels of Cd during lactation was studied. Female rats were supplied with *ad libitum* drinking water containing 300 mg/l of CdCl<sub>2</sub> throughout the whole lactation period. Control animals received a similar volume of water without Cd. Lactating rats (21 day-old) were killed by lethal dose of anesthetic. The heads were retrieved, fixed in "alfac" solution (alcohol, acetic acid and formaldehyde) for 24 h, serially sectioned in frontal plane, at the level of the first molars. The 6 µ sections were then stained with hematoxylin and eosin. Nuclear epithelium parameters were estimated, as well as cytoplasm and cell volume, nucleus/cytoplasm ratio, numeric and surface densities, and epithelial thickness. Mean body weight was 34.86 g for the control group and 18.56 g for the Cd-treated group. Histologically, the floor of the mouth epithelium was thinner in the treated group, with smaller and more numerous cells. In this experiment, Cd induced epithelial hypotrophy, indicating a direct action in oral mucosa cells, besides retarded development of the pups.

Keywords : Mouth mucosa; Microscopy, polarization; Cadmium; Morphometry; Stereology.

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