

## Mercury in Breast Milk Passed to Infants

One of the biomarker of exposure to methylmercury from fish that can affect the neurological development of children is Hair mercury (HHg) concentration. In the Rio Madeira basin (Brazilian Amazon), total HHg concentrations in 649 mother–infant pairs were measured at birth (prenatal exposure) and after 6 months of exclusive breastfeeding; these mother–infant pairs were from high fish-eating communities and low fish-eating tin-miner settlers.

Overall maternal HHg concentrations (at childbirth and after 6 months of lactation) were higher than those of infant HHg. However, the relative change in HHg after 6 months of lactation showed that mothers **decreased** HHg while infants **increased** HHg.

Regression analysis significantly predicted HHg in newborn from maternal HHg for high fish-eating maternal-infant pairs.

**Conclusion:** The concentration of mercury accumulated in newborn tissues (in utero and during breastfeeding) relevant to both, maternal sources and infant exposure, can be reliably assessed from maternal hair.

Rejane C. Marques, José V. E. Bernardi, José G. Dórea, Renata S. Leão, Olaf Malm. Mercury Transfer During Pregnancy and Breastfeeding: Hair Mercury Concentrations as Biomarker. *Biological Trace Element Research*. September 2013, Volume 154, Issue 3, pp 326–332.