DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Agency for Toxic Substances
and Disease Registry
Atlanta, GA 30333

December 13, 2019

Karen Sullivan, Butte-Silver Bow Health Officer
25 W. Front Street
Butte, MT 59701

Laura Williamson, State Epidemiologist, Montana DPHHS
1400 Broadway, Room B102
PO Box 202951
Helena, MT 59620-2951

RE: Butte Meconium Study Health Concerns

Dear Ms. Sullivan and Williamson:

The Agency for Toxic Substances and Disease Registry (ATSDR), a federal public health agency in Atlanta, GA is aware of the recent publication of a cross-sectional pilot study conducted in Butte and Columbia, SC focusing on levels of metals in the meconium of newborns (McDermott, Hailer and Lead, Science of the Total Environment, online Nov. 2019).

In review of the publication, ATSDR does not concur with the author's closing statement of a "potential public health emergency," a statement that is not taken lightly by ATSDR. ATSDR does not anticipate that a public health emergency is imminent based on the results of the McDermott et al. study.

After initial review of the study, ATSDR notes the following:

1. Comparison of this study to published results from several other meconium studies indicates that the meconium metal levels (manganese, copper, zinc) observed in Butte are within the range of those observed in other healthy study populations.

2. Manganese is an essential trace element, and copper and zinc are essential minerals. All three are naturally present in many foods, are present in prenatal vitamins, and are essential for fetal development.

3. There appear to be no elevated levels of manganese, copper and zinc in the Butte environment that would result in an elevated concentration in the meconium of newborns. It is improbable that environmental exposure (other than diet) is a significant contributor

to manganese, copper and zinc levels in the bodies of Butte residents. The levels of manganese, copper and zinc in Butte soil and air are within range of typical urban areas and not high enough to require cleanup. The level of copper in Butte city water is within EPA regulatory standards (below the MCL); manganese and zinc were not reported since they have guidelines but not MCLs. ATSDR will follow up with the Department of Public Works to see if manganese and zinc levels have been recently measured.

We hope that this correspondence will aid in communicating information with impacted communities and reduce unnecessary anxiety caused by the public health emergency statement put forth by the authors of the recent study. ATSDR will continue to review new data as they are provided to assess any health concerns in the Butte area. If you have any questions, please feel free to reach out to me.

Sincerely,

Kai Elgethun, Ph.D., MPH
ATSDR
Regional Director, Region 8
Environmental Health Officer
Division of Community Health Investigations

Attachment: References

References

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