From: Dykema, Linda D. (DHHS)
Sent: Friday, October 30, 2015 2:27 PM
To: Wells, Eden (DHHS)
Subject: RE: Breast feeding and maternal lead exposure
Attachments: leadandpregnancy CDC 2010.pdf

Follow Up Flag: Flag for follow up
Flag Status: Completed

I don't have any information beyond what's in this CDC publication that I had previously shared with you.

From: Wells, Eden (DHHS)
Sent: Friday, October 30, 2015 2:18 PM
To: Dykema, Linda D. (DHHS)
Subject: Fwd: Breast feeding and maternal lead exposure

Sent from my iPhone

Begin forwarded message:

From: "Valacak, Mark" <MVALACAK@gchd.us>
Date: October 30, 2015 at 1:53:22 PM EDT
To: "Wells, Eden (DHHS)" <WellsE3@michigan.gov>, Laura Carravallah <Laura.Carravallah@hc.msu.edu>
Cc: Lawrence Reynolds <lrey52@gmail.com>, <gdn2@aol.com>, Peter Levine <plevine@gcms.org>
Subject: RE: Breast feeding and maternal lead exposure

in adults when we see high levels it is generally an occupational exposure and inhalation of lead fumes in industrial exposure settings like battery manufacturing, lead smelting, and stained lead glass.

A couple of factors are important to remember when we are talking about lead exposure in adults versus children. Absorptions rates from gastrointestinal exposure are lower in adults versus children. So where a toddler might absorb about 50%, absorption rates decline in adults to 3-10%. About 90% of lead will end up in the bone where it mimics calcium. It causes less harm there then if it went to soft tissues like the liver or kidneys. The problem is that under circumstances that cause calcium mobilization, lead stored in the bone may remobilize and circulate in the blood, elevating blood lead levels. The mobilization of stored lead with pregnancy, menopause, and aging is a cause for concern. So to help mitigate that there should be an emphasis on good nutrition and a calcium rich diet. Pregnant and breastfeeding woman should be sure to take their vitamins to minimize calcium mobilization from the bones.

Reinforcing these messages would help minimize exposure.

Mark Valacak, MPH, Health Officer
Genesee County Health Department,
630 S. Saginaw St. Suite 4 Flint, MI 48502-1540

Phone 810-257-3588 Fax 810 257-3147
E-mail nvalacak@gchd.us

PublicHealth

From: Wells, Eden (DHHS) [mailto:WellsE3@michigan.gov]
Sent: Friday, October 30, 2015 12:02 PM
To: Laura Carravallah
Cc: Lawrence Reynolds; gdn2@aol.com; Peter Levine; Valacak, Mark
Subject: Re: Breast feeding and maternal lead exposure

Looping I our toxicologist, as we ha e discussed this. Note that anyone should be using filtered or bottled water now, so that the issue of which house and which risk should already be addressed. Also- we do not have any data supporting adults with blood lead levels that high (Off top of my head) and none have been in the 40's or higher since Long before April 2014.

Regardless, Linda and I had talked about breastfeeding moms... She can help.

Eden

Sent from my iPhone

On Oct 30, 2015, at 11:33 AM, Laura Carravallah <Laura.Carravallah@hc.msu.edu> wrote:

> Thank you for your quick answer!
>
> This makes sense for pregnant moms, as there is no choice as to how the baby will get its nourishment. However, for breastfeeding moms in households in which filters will be provided, **do we know that breast milk (with possible higher maternal BLLs secondary to bone release from chronic exposure) is** preferable to filtered tap water? Does anybody know what the range of breast milk lead levels are in women who have BLLs around 30 or 35? In the data that Dr. Reynolds and I looked at (previously attached) the BLLs didn't go that high, and it said that the breast milk levels fluctuated.
>
> In the Ettinger paper the highest maternal BLL with a breast milk sample was 29.9 (Table 1), which is less than the level of 40 recommended in the MDHHS handout. The article said that "Breast milk lead expressed as percentage of maternal blood lead ranged from 0.4 to 9.2% (mean = 1.6%, SD = 1.2%)" – p 929. The means a less an issue than the outliers, considering some of the extremely high water lead levels that have been found in the city and also the difficulty of predicting which houses might be most at risk.
>
> I'm not sure if there is other, better data out there that might shed some light on this? Also, your attached pamphlet does deflect patients back to their doctors, but I'm