

**Nordenberg, Tamar**

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**From:** Carson, Louis J  
**Sent:** Wednesday, January 17, 2001 6:59 AM  
**To:** Davidson, Marjorie L; Spiller, Philip C; Levitt, Joseph A; Levy, Alan S; Nordenberg, Tamar; Bolger, Philip M; Lake, Lloyd R; Buchanan, Robert L  
**Subject:** FW: Consumer Advisory Issued Jan. 12, 2001

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-----Original Message-----

**From:** Michael Gochfeld [mailto:gochfeld@ehsi.rutgers.edu]  
**Sent:** Wednesday, January 17, 2001 6:48 AM  
**To:** Wilms, Heinz G  
**Cc:** 'brian.toal@po.state.ct.us'; Fuller, Marion; 'andy.e.smith@state.me.us'; 'c.mark.smith@state.ma.us'; 'elaine.krueger@state.ma.us'; 'mround@nescaum.org'; 'hillary.carpenter@health.state.mn.us'; 'thomas.massso@state.mn.us'; 'astern@dep.state.nj.us'; 'moorec@mrd.dnr.state.sc.us'; 'john.lattimore@tdh.state.tx.us'; 'john.villanacci@tdh.state.tx.us'; 'mtbendervt@aol.com'; 'bbress@vdh.state.vt.us'; 'rhoffma@vdh.state.vt.us'; 'knobelm@dhfs.state.wi.us'; Carson, Louis J; Barnes, Richard H; Imcgeorge@dep.state.nj.us  
**Subject:** Consumer Advisory Issued Jan. 12, 2001

To Heinz Wilms

I was surprised and gratified that FDA issued its revised advisory. As chair of New Jersey's Mercury Task Force, I think it will bring added clarity to our final report (as well as removing one of our recommendations). If one assumes that the average MeHg level in commercial fish is 0.1 ug/g (0.1 ppm), then the 12 oz/week advisory corresponds roughly to EPA's RfD of 0.1 ug/kg/day for a 60 kg female.

I appreciate that such advisories come about based on extensive review and deliberations, so my comment that follows takes into account that this advisory was carefully crafted.

However, I was disquieted by the statement (see below) that it is all right to eat more than 12 oz in some weeks if it is counter-balanced by lower doses in other weeks. This may be all right occasionally, but there is no scientific basis to support this "advice" and there is good reason to assume that it is misleading.

We don't know (nor are we likely to learn soon, if ever), exactly at what peak dose, there will be significant effects on fetal neurodevelopment or whether there is a threshold level (concentration or amount reaching the fetus/day). But toxicologic principles (as well as anyone's general experience with pharmaceuticals) indicates that pulsed doses of almost any physiologically active agent, have greater acute effects than the same total dose taken in divided doses. Since the neurodevelopmental damage to the fetus behaves at least partly as acute effects (different kinds of damage occurring during relatively narrow time windows in the development of the nervous system), this principle should not be ignored.

It is likely that pulsed high doses have greater (or even much greater) impacts than continual low doses. The woman who eats one 12 oz tuna steak containing 0.1 ug/g will ingest a pulse dose of roughly 34 ug of MeHg, while the woman who eats 6 meals of tuna of 2 oz each (probably less than many women actually consume), would be getting roughly 7 ug/day. The former will achieve a higher

blood level of MeHg (even if only transiently) than the latter. If there were a threshold at let's arbitrarily say 10 ug/day, the former woman would exceed it greatly, while the latter would not at all.

It is probably true that one week's exceedance doesn't change the level in the maternal body, but there's no reason to assume it doesn't change transient blood levels delivered to the fetus.

Although there are no data that would help us know how unsafe it is to exceed 12 oz/week, there are no data indicating how safe it is. The term "regular basis" needs clarification and perhaps focus group testing. For example, will women assume they can do this every other week, once a quarter etc. Perhaps "occasional", imprecise though it may be, would be helpful.

Michael Gochfeld

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and  
Chair: New Jersey's Mercury Task Force

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>> WHAT IF I EAT MORE THAN 12 OUNCES OF FISH A WEEK?  
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>> There is no harm in eating more than 12 ounces of fish in one week as long  
>> as you don't do it on a regular basis. One week's consumption does not  
>> change the level of methylmercury in the body much at all. If you eat a  
>> lot of fish one week, you can cut back the next week or two and be just  
>> fine. Just make sure you average 12 ounces of fish a week.  
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