Use of Supplements with and without Iodine in Women of Childbearing Age in the United States

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Dear Editor:

The iodine status of women of childbearing age in the United States has declined dramatically over the last 25 years (1,2). In fact, using criteria from the World Health Organization, certain subgroups may be classified as iodine deficient (3). Given this dramatic decline in iodine status and the critical role of iodine in fetal neurologic development, in October 2006 the American Thyroid Association recommended iodine supplementation for all pregnant and lactating women in the United States and Canada (4).

We were interested in determining the percentage of women of childbearing age in the United States taking supplements and the percentage taking supplements containing iodine. We looked at data from the National Health and Nutrition Examination Survey (NHANES) for the years 2001–2006. NHANES is a stratified, multistage survey that provides a representative sample of the noninstitutionalized U.S. population (5). Information collected includes the use of any vitamins, minerals, or other dietary supplements within the previous 30 days. Product names are obtained and are compared to a database containing information including vitamin and mineral content.

The reported use of any supplement and use of a supplement containing iodine within the previous 30 days is presented in Table 1 for nonpregnant women of childbearing age (15–44 years) and pregnant and lactating women. Less than half of nonpregnant women were taking any supplement compared to three fourths of pregnant women and two thirds of lactating women. Only one fifth of nonpregnant and pregnant women and 15% of lactating women were taking a supplement that contained iodine. Although the prevalence of supplement use was much higher among pregnant and lactating women compared to nonpregnant women, the prevalence of taking a supplement containing iodine was similarly low among all groups. This indicates that a lower percentage of supplements consumed by pregnant and lactating women contained iodine compared to supplements consumed by nonpregnant women (26% and 22%, vs. 47%, respectively).

Most of these data were collected prior to the American Thyroid Association’s recommendation of iodine supplementation for pregnant and lactating women and provide a baseline of supplement use containing iodine. Recent evidence suggests an increase in the inclusion of iodine in prenatal supplements since the 2006 recommendation; however, the iodine content of prenatal supplements is not regulated in the United States and the amount of iodine in supplements often differs from the amount listed on the label (6). This situation warrants further monitoring.

Although the American Thyroid Association recommendation may have contributed to a change in the formulation of some prenatal vitamins, it is unlikely to have had an impact on the formulation of other supplements. Our results suggest that the majority of women of childbearing age are not consuming supplements containing iodine. Given that the critical period for thyroid hormones in neurologic development occurs before many women may know they are pregnant, it is important to ensure adequate iodine nutrition among all women of childbearing age. In the long term, a carefully planned and monitored iodine fortification program combined with supplement use may be a more effective and equitable approach to assuring adequate iodine nutrition for the entire population.

<table>
<thead>
<tr>
<th>Any supplement</th>
<th>Supplement with iodine</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Not pregnant</td>
<td>4322</td>
</tr>
<tr>
<td>Pregnant*</td>
<td>983</td>
</tr>
<tr>
<td>Lactating</td>
<td>143</td>
</tr>
</tbody>
</table>

Use of supplements is defined as any use within the previous 30 days. Estimates are weighted to account for complex survey design.

*Twenty-one women were both pregnant and lactating; these women are included with the pregnant group only.

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References


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