TO THE EDITOR: I have several concerns about the letter to the Editor by Leung et al. (Feb. 26 issue).1 Scientific studies must provide methodologic details or else the veracity of the results presented cannot be evaluated. Leung et al. provide no details regarding sample preparation and the method used for detecting and quantitating iodine content. A titrimetric method for measuring iodine, which dates back to 1932,2 or a modern method involving inductively coupled plasma–mass spectrometry3 may have been used. Both methods are subject to interferences. In addition, the study draws conclusions about the iodine content in marketed products; these conclusions are not supported by a sampling plan and thus may not be justified.4 Tools for assessing the accuracy and precision of chemical measurements do exist; for instance, Standard Reference Material 3280 can be used to assign a certified value to the iodine content of multivitamins and multielement tablets.5 Although we support the need for ensuring nutritional adequacy, the lack of rigor in sampling and reporting casts doubt on the accuracy of the results of the study by Leung and colleagues.

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THE AUTHORS REPLY: With regard to the comments of Betz and Wise: our description of laboratory methods in our letter was limited because of space constraints. We measured iodine in prenatal multivitamin tablets, using a modification of the Sandell–Kolthoff spectrophotometric method originally described by Pino, from our laboratory, in 1965.3 Our laboratory also measures iodine concentrations by means of mass spectrometry, and the results of the two methods are generally similar. Our laboratory has been certified annually by the Ensuring the Quality of Urinary Iodine Procedures (EQUIP) program of the Centers for Disease Control and Prevention, and we have measured iodine in urine and other substances for multiple studies over the past four decades.2,3,5

Our intent was to provide a broad overview of the supplements available to pregnant and lactating women, who may be susceptible to iodine deficiency. Among the observations we noted in our letter to the Editor was that 49% of types of prenatal multivitamins marketed in the United States contain no iodine; this finding is not dependent on laboratory or sampling methods and has important implications for public health.

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More on Iodine Content of Prenatal Vitamins

prehensive longitudinal studies of circulating serotonin measured in a standardized manner in patients with osteoporosis and other disorders.

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Antibodies against H5 and H9 Avian Influenza among Poultry Workers in China

TO THE EDITOR: Human infection with the H5N1 or H9N2 avian influenza virus has been reported in the city of Guangzhou in southern China.1,2 To assess the risk of avian influenza virus infection among humans, we conducted a serologic surveillance study in Guangzhou. A total of 2191 healthy persons were recruited from 230 workplaces and seven types of occupations from March 2007 to February 2008.

We used a commercial enzyme-linked immunosorbent assay to detect antibodies against H5 and H9 avian influenza virus in serum samples. The anti-H5 and anti-H9 enzyme-linked immunosorbent assay (ELISA) kits were kindly provided by the Institut Pasteur in China. The ELISA was performed according to the manufacturer’s instructions. Serum samples were considered positive if the optical density of the test sample was more than 0.62 (the absorbance of the negative control) with a cut-off value of 0.3 for the positive control. The positive cut-off value was determined by using 200 sera from healthy persons residing in southern China.

The serologic surveillance study included 2191 healthy persons, a total of 230 workplaces, and 7 types of occupations. The seroprevalence rate of H5 was 0.2% (4/2191), and the seroprevalence rate of H9 was 4.5% (99/2191). The median age of the study population was 18 to 29 years. The median age of anti-H5–positive persons was 29 to 39 years, and that of anti-H9–positive persons was 29 to 39 years.

The odds ratio for the H9 seropositive group was 14.00 (95% CI, 4.92–39.81; P < 0.001), and the odds ratio for the H9 seropositive group was 5.49 (95% CI, 1.81–16.69; P = 0.003). The seroprevalence rate of H9 was higher than that of H5. The seroprevalence rate of H9 was 4.5% (99/2191), and the seroprevalence rate of H5 was 0.2% (4/2191). The median age of the H9 seropositive group was 29 to 39 years, and that of the H5 seropositive group was 29 to 39 years.

Table 1. Results of a Serologic Surveillance Study of Human Infection with H5 or H9 Avian Influenza Virus.*

<table>
<thead>
<tr>
<th>Group</th>
<th>Subjects Tested</th>
<th>Anti-H5–Positive</th>
<th>Anti-H9–Positive</th>
<th>Odds Ratio (95% CI)</th>
<th>P Value †</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry retailers in food market</td>
<td>252</td>
<td>2 (0.8)</td>
<td>39 (15.5)</td>
<td>14.00 (4.92–39.81)</td>
<td>&lt;0.001</td>
<td>Samples were obtained from subjects in 52 live-poultry food markets; anti-H5–positive samples were obtained from 2 sites and anti-H9–positive samples were obtained from 22 sites</td>
</tr>
<tr>
<td>Poultry wholesalers in poultry wholesale market</td>
<td>244</td>
<td>2 (0.8)</td>
<td>16 (6.6)</td>
<td>5.49 (1.81–16.69)</td>
<td>0.003</td>
<td>Samples were obtained from subjects in nine poultry wholesale markets; anti-H5–positive samples were obtained from two sites and anti-H9–positive samples were obtained from five sites</td>
</tr>
<tr>
<td>Workers in large-scale poultry-breeding enterprise‡</td>
<td>125</td>
<td>0</td>
<td>7 (5.6)</td>
<td>4.74 (1.34–16.56)</td>
<td>0.01</td>
<td>Anti-H9–positive samples were obtained from 6 of 15 enterprises</td>
</tr>
<tr>
<td>Farmers in small-scale rural poultry farm§</td>
<td>869</td>
<td>0</td>
<td>24 (2.8)</td>
<td>2.48 (0.84–7.29)</td>
<td>0.06</td>
<td>Positive samples were obtained from 12 of 28 farms</td>
</tr>
<tr>
<td>Workers in pig-breeding enterprise</td>
<td>182</td>
<td>0</td>
<td>5 (2.7)</td>
<td>2.42 (0.63–9.23)</td>
<td>0.38</td>
<td>Positive samples were obtained from 5 of 50 enterprises</td>
</tr>
<tr>
<td>Retailers of goods other than poultry in food market</td>
<td>218</td>
<td>0</td>
<td>4 (1.8)</td>
<td>1.42 (0.35–5.75)</td>
<td>0.63</td>
<td>Positive samples were obtained from 2 of 52 live-poultry food markets</td>
</tr>
<tr>
<td>General population</td>
<td>301</td>
<td>0</td>
<td>4 (1.3)</td>
<td></td>
<td></td>
<td>Samples were obtained from 2 factories, 4 malls, 55 villages, 1 bar, 1 hotel, and 1 kindergarten; positive samples were obtained from 2 sites</td>
</tr>
<tr>
<td>Total</td>
<td>2191</td>
<td>4 (0.2)</td>
<td>99 (4.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* CI denotes confidence interval.
† P<0.05 for the comparison between the first three groups and the general-population group.
‡ Approximately 50 to 100 workers and one or two species of poultry (>100,000 birds) are generally housed in a roof-covered henhouse with walls.
§ Small-scale poultry farms that are located in rural areas are run by families. Each poultry farm usually keeps only one species of poultry (2000 to 10,000 birds) in an open, spacious henhouse enclosed with fences.