Health action in crises

FAQs: Japan nuclear concerns

25 March 2011

Drinking water safety

Can I drink the tap water in Japan?

- Yes, drinking tap water in Japan poses no immediate health risk.
- The standards adopted by the Japanese authorities for this emergency are precautionary. Currently, radioactive iodine is the most common detected contaminant; the standard for adults is 300 Becquerels per litre in drinking-water. In the very unlikely scenario that drinking-water was contaminated and consumed for an entire year at this level, the additional radiation exposure from this water would be equivalent to natural background radiation during one year.
- Japanese authorities are closely monitoring the situation and are issuing advice if needed against consumption of tap water, including specific recommendations for infants. Essential hydration of infants should not be compromised in an attempt to reduce exposure to radionuclide contamination.

Can radioactive contamination be removed from water?

- Standard water treatment procedures may remove significant amounts of radioactive contaminants. Other options to reduce concentrations of radiation contaminants include controlled dilution of contaminated water with non-contaminated water.
- Boiling water will not remove radioactive iodine.

Why do the guidance levels for radioactive iodine-131 in drinking water vary?

The guidance levels found in different sets of recommendations vary because some apply to routine situations and others to emergency situations. The table below summarizes the guidance on radioactive iodine-131 in drinking water and provides an indication of the equivalent exposure from routine activities.

<table>
<thead>
<tr>
<th>Guideline name</th>
<th>Radioactive activity in water (Bq/L)</th>
<th>Approximate equivalent annual dose (mSv/year)</th>
<th>Notes on health risks if consuming water at this level for a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO Guidelines for Drinking-water Quality (1)</td>
<td>10</td>
<td>0.1</td>
<td>Equivalent a to New York - London flight</td>
</tr>
</tbody>
</table>

Related links

Japan earthquake and tsunami

Latest Situation report WHO Western Pacific Regional Office

Archive of Japan nuclear concerns frequently asked questions (FAQs)
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<tr>
<td>Japan provisional (emergency) standard for adults (2)</td>
<td>300</td>
<td>2.5</td>
<td>Roughly equivalent to one year's exposure to natural background radiation, or 10 to 15 chest X-rays</td>
</tr>
<tr>
<td>Japanese provisional (emergency) standard for infants (3)</td>
<td>100</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>IAEA Operational Intervention level for nuclear emergencies (4)</td>
<td>3000</td>
<td>10</td>
<td>Equivalent to an abdominal CT scan</td>
</tr>
</tbody>
</table>

(1) WHO Guidelines for Drinking-water Quality should not be taken as the reference point for nuclear emergencies because the levels set are extremely conservative and designed to apply to routine lifetime intake.

(2) Provisional regulation values relating to limits on food and drink ingestion, established by the Japanese Food Sanitation Act, as indicated by the Nuclear Safety Commission of Japan. These standards are precautionary and have taken into consideration international guidance, including IAEA and the International Commission on Radiological Protection recommendations.

(3) As in (2) above, but applicable to drinking-water used to prepare baby food. This level is equivalent to the international guideline set by Codex Alimentarius for infant food.

(4) IAEA Safety Guide GSG-2 established Operational Intervention Levels (OILs) which would be the default international guidance levels for the early stage of an emergency.