

## RADIOACTIVE I-131 EXPOSURES: RESOURCES ARE ON THE WAY

OVER 43,000 HOUSEHOLDS in the states of Oregon, Washington and Idaho have expressed concerns about their past radiation exposures and the impact on their health from releases of the Hanford Nuclear Reservation in southeastern Washington. They wonder how much of a radiation dose they received, what it may do to their health, and what they can and should do about it. During the next year, intervention programs, study results and clinical practice guidelines will become available to help citizens and their health care providers to address these issues.

Over seven thousand households and family members in Oregon could make up part of your client/patient population.

This *CD Summary* edition summarizes upcoming programs, services and studies that will generate interest and concerns about radiation exposure, particularly Iodine-131 (I-131). The result of existing studies may answer some questions about the risk of exposure to I-131 and its relationship to thyroid diseases. They may also provide some guidance to practitioners who have patients in this at-risk population.

### THE HANFORD INDIVIDUAL DOSE ASSESSMENT (IDA) PROJECT

The Hanford IDA Project is a public service jointly operated by the Washington State Department of Health, the Oregon Health Division, the Idaho Division of Health and the Centers for Disease Control and Prevention. This public service program will provide citizens with thyroid dose estimates from exposures to I-131 released into the air at the Hanford Nuclear Reservation.

The Hanford IDA Project will use the Hanford Environmental Dose Reconstruction (HEDR) Project's computer model to calculate individual dose estimates.<sup>1</sup> Citizens who lived or spent time in the HEDR study area between December 26, 1944, (the start of plutonium production) and December 31, 1957 are

eligible to receive their individual thyroid (I-131) dose estimates. According to the HEDR study, I-131 was the radionuclide released to the air in the largest amounts. Transmission through contaminated milk, fresh fruit, and vegetables accounted for as much as 99 percent of exposures in 1945.<sup>2</sup>

The Hanford IDA Project will use the HEDR computer models and add an individual's residence and diet history to determine a thyroid dose estimate. The computer models take into account the volume and concentration of Hanford releases, the weather at the time, how the releases moved through the environment, the pathways by which people were exposed, and other variables.

#### Factors that affect the dose of radiation received:

- drinking contaminated milk
- eating contaminated raw fruits, leafy vegetables and berries
- eating contaminated fish and shellfish
- boating or swimming in the Columbia River below Hanford
- living a certain distance and direction from Hanford
- gender and age

When people receive their thyroid dose estimate, they will also receive a booklet of information about the dose estimates and what they may mean to their health. The information booklet will cover topics such as: definitions of dose estimates, exposure and risk of illness, what is and is not included in the dose estimate and other topics. The Hanford IDA Project has contacted many people who are interested in taking this information to their health care providers to seek individual advice and preventive screening.

### HANFORD THYROID DISEASE STUDY (HTDS)

Further information about the significance of the dose estimate to an individual's health may be available when the results of the Hanford Thyroid Disease Study (HTDS) are published. This cohort study, conducted by the Fred Hutchinson Cancer Research Center in Seattle, is investigating whether thyroid disease is increased among persons exposed to atmospheric releases of radioactive materials from Hanford between 1944 and 1957. HTDS is using the same HEDR computer models as the Hanford IDA Project.

The HTDS research team anticipates an early 1999 publishing date. The Hanford IDA Project and HTDS researchers will collaborate to determine how the individual thyroid dose estimates and the results from the HTDS study can be used to further determine risk and develop guidelines for preventive monitoring.

### AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY'S (ATSDR) MEDICAL MONITORING PROGRAM

Receiving an individual dose estimate from the Hanford IDA Project may also qualify some people for medical monitoring. People who receive an individual thyroid dose estimate of 10 rad or higher and lived in the exposed area as children will be eligible for the Hanford Medical Monitoring Program. Superfund legislation created and "authorized the ATSDR to initiate medical monitoring for people exposed to hazardous substances at sites owned by the federal government."<sup>3</sup> The program is currently under funding consideration for implementation in the Northwest.

The monitoring service will provide access to screening for thyroid diseases to citizens who meet certain criteria and IDA indicators. Age and residence for a specific length of time in certain locations of the HEDR study area will automatically qualify people for the medical monitoring

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program. ATSDR's program will provide screening, but not treatment services.

### **PUBLIC HEALTH IMPLICATIONS OF EXPOSURE TO I-131 FROM NEVADA ATOMIC BOMB TESTS**

In June, the National Research Council (NRC) of the National Academy of Sciences will publish a report describing clinical practice guidelines for evaluating, treating and counseling exposed persons. These guidelines are being developed in response to the National Cancer Institute's (NCI) recently released study on fallout from the Nevada Test Site (NTS). According to NCI's report "ninety nuclear tests released almost 99% of the total I-131 entering the atmosphere from the bomb tests conducted at the NTS"<sup>4</sup> during the 1950's and 1960's. The emissions swept eastward across the nation. The NRC will also produce "intervention, surveillance, education and information strategies for public health authorities and health care providers."<sup>5</sup>

### **THE NORTHWEST AND THE HANFORD IDA PROJECT**

The three state public health agencies (Oregon, Idaho, Washington) are planning to deliver individual dose estimates starting in late 1998. However, the date is contingent upon completion of computer programming and field testing of the process and materials.

Information about these programs will be continually updated by the Oregon Health Division's Hanford Health Information Network (HHIN) and distributed to health care provider organizations and health care organizations.

### **For additional information, please contact:**

#### **Hanford Individual Dose Assessment Project**

1-800-432-6242  
<http://www.doh.wa.gov/ehp/rp/rp-ida2.htm>

#### **Hanford Environmental Dose Reconstruction Project (HEDR)**

1-800-545-5581

#### **Hanford Thyroid Disease Study**

Fred Hutchinson  
Cancer Research Center, Seattle  
1-800-638-4837  
<http://www/fhcr.org/science/phs/htds/>

#### **Oregon Hanford Health Information Network**

1-800-248-4446 or 731-4025  
in Portland

### **REFERENCES:**

1. Hanford Individual Dose Assessment Project, Fact sheet, January 1998.
2. CDC, Till J, *Representative Hanford Radiation Dose Estimates*, Publication of the Technical Steering Panel of the Hanford Dose Reconstruction Project, 1994; 5.
3. ATSDR. Fact Sheet #10. 1997.
4. NCI. Estimated exposures and thyroid doses received by the American people from Iodine-131 in fallout following Nevada atmospheric nuclear bomb tests, a Report from the National Cancer Institute, October, 1997, ts.1.
5. NIH.IOM.NAS. Request to assess the public health and medical implications of the exposure of Americans to release of radioactive I-131 from atomic bomb tests in Nevada from 1951 to 1962. 1998

### **Influenza Update**

**E**XAMINATION OF 478 specimens of epidemic catarrh submitted to the Oregon State Public Health Laboratory to R/O Influenza revealed 75 cases of type A influenza. The involved

subtypes and fine distinctions between A/Wuhan/359/95(H3N2)-like strains and A/Sydney/5/97(H3N2)-like strains have yet to be made. Analysis of immunization data for those with and without influenza having onset of illness during the week ending 01/31/98 to the present reveals a decreasing efficacy of a prior vaccination and may be indicative of the increasing spread of A/Sydney/5/97(H3N2)-like strains in Oregon. Peak incidence of influenza and influenza-like illness occurred during the week ending 01/24/98 and has continued to wane.

### **FLU VACCINE FOR 1998-1999**

On 18 February the World Health Organization announced the recommended composition for influenza vaccine to be employed for the 1998-1999 season. The type B component (B/Beijing/184/93-like virus) in the current vaccine will be retained and combined with two new type A components: A/Sydney/5/97(H3N2)-like virus and A/Beijing/184/93(H1N1)-like virus. The influenza strains intended for vaccine production here in the US will soon be announced by the CDC.

Influenza Cases by Month - Oregon, 1995-98

