

# The Chernobyl Accident - Health effects

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*Dr Baverstock from the European Centre for Environment and Health, a division of the World Health Organization, published an open letter on 28 April 1995 summarising the views of WHO regarding the health effects of the Chernobyl accident. It is reproduced in full and without alteration.*

## European Centre for Environment and Health

### The Chernobyl Accident - 26 April 1986

In connection with the anniversary of the Chernobyl accident I have received a number of requests for information about the health effects that have followed the accident. The following is an extract from a recent report giving details of the health effects that have been verified so far and those that might be expected in the future, which may prove useful to members of ECEH.

"In the accident about 200 persons among the operating staff and the fire fighting crew suffered acute effects of radiation. About 115 000 residents were moved from the 30 km radius exclusion zone surrounding the reactor, and there is the possibility that an additional 200 000 or more will be relocated in the future. Some 650 000 persons involved in the cleanup of the plant site and the 30 km zone were also exposed. Very extensive areas of the former Soviet Union and beyond its frontiers were affected by radioactive fallout.

At the present time, nine years later, many of the expected potential health effects of exposure to radiation have not yet become apparent because of the long latencies for some radiation-induced cancers. The full impact of the accident will become apparent only after several decades. So far the health consequences are as follows:

- acute radiation sickness and burns to the skin from beta radioactivity to some 200 persons, causing 28 deaths from acute radiation syndrome.
- childhood thyroid cancer in children living in Belarus, the northern districts of the Ukraine and parts of the eastern border of the Russian Federation with Belarus and the Ukraine. So far nearly 500 cases of childhood thyroid cancer have been detected in a population of about 3 million particularly at risk.
- psycho-social effects from stress related conditions, through lifestyle changes, to near complete social disintegration of communities. Some 10 million persons live in the most affected regions.

On the basis of past experience of exposure to radiation further effects may be expected. The tissue most sensitive to radiation exposure in addition to the thyroid and bone marrow is the breast of young women. Populations with 100 km would be particularly at risk. The isotopes of iodine could contribute to breast dose at certain stages of development or during and after pregnancy.

The effects of beta-emitting hot particles on the induction of skin and lung cancers is also a matter for concern. Such hot particles were observed as far afield as Finland and animal experiments have shown them to be capable of inducing lung tumours.

Due to the size of the exposed population hitherto unrecognized effects of radiation resulting from the incorporation of the less well studied fission products may well become evident in due course."

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ECEH, Rome  
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