

CHERNOBYL CHILDREN'S PROJECT (UK)

ПОДДЕРЖКА ДЕТЯМ БЕЛАРУСИ

The Effects of the Accident on Human Health



The full extent of the effects of the Chernobyl accident on human health is difficult to assess and remains controversial. As many as 600,000 people, known as liquidators, were involved in the clean up after the accident.

According to figures previously issued by government agencies in Belarus, Ukraine and Russia, about 25 000 of the liquidators have so far died as a result of their exposure to radiation. According to the Liquidators' Committee, the total number of deaths is 60, 000, so 10 percent of the total.

Thyroid cancer

Thyroid cancer is caused by the absorption of radio-iodine into the thyroid gland. In the case of all those living close to Chernobyl this was exacerbated by endemic iodine deficiency. The thyroid hormone, normally produced by this gland, regulates growth and physical and mental development. Children who develop thyroid cancer and must have the gland removed, need to take thyroxin for the rest of their lives.

In the ten years before the Chernobyl accident, just seven children contracted thyroid cancer in Belarus. Within four years of the accident this level had risen by 30 times, but it was not until 1995 that the World Health Organisation (WHO) officially recognised the link between radiation from Chernobyl and thyroid cancer.

It was the Gomel Region which was most heavily affected by the fallout of Iodine-131 and children under 4 years old ingested the highest doses. The greatest number of thyroid cancers have occurred in this region and now the (WHO) predicts that one third of all the children from the area around Gomel aged between 0 and 4 at the time of the accident will develop thyroid cancer during their lifetime – a total of 50,000 children in this group alone.

A total of 4,000 people, mostly children and adolescents who were living in the most severely contaminated areas at the time of the accident, have already contracted cancer of the thyroid because of the reactor disaster.

Leukaemia in children and adults

Leukaemia statistics have been the most controversial of all the health effects of the accident. In the Gomel region an increase in leukaemia cases of about 50 per cent compared to the period before the disaster was recorded in both children and adults, in the early years following the accident, according to the clinics responsible.

These figures run counter to the Conclusions of the 3rd International Conference "Health Effects of the Chernobyl Accident", held in Kiev in June 2001. There, many researchers reported that there was no significant increase in cases of childhood or adult leukaemia in the contaminated territories of the three countries affected. It is most likely that there was a rise in the early years and the numbers have now reduced.

Other cancers

A statistical survey by doctors from the area around Gomel in Belarus showed that of every 100 000 people in the area, 240 would normally be expected to develop cancer; this figure has now risen to 346. The increase is greatest in the most severely contaminated districts of the Gomel Region – Vetka, Bragin, Khoyniki and Narovlya. Men have

most commonly developed tumours of the lungs, stomach, skin and prostate. Women primarily have tumours of the breast, uterus, stomach and skin

In December 2004 the 'Swiss Medical Weekly' published findings from the Clinical Institute of Radiation Medicine and Endocrinology Research, in Minsk, showing a 40% increase in cancer between 1990 and 2000. The researchers used data from the National Cancer Registry, established in 1973.

An increased incidence of breast cancer as a direct consequence of the accident has also been recognised internationally. The number of cases has doubled in the area around Gomel in Belarus – one of the most severely contaminated territories. Belarusian and Ukrainian scientists also predict further increases in urogenital tumours and lung and stomach cancer, both among the liquidators and in the general male population of the severely contaminated areas This prediction is supported by cancer specialists in other countries

Other diseases in children

United Nations Children's Fund (UNICEF) analysed health statistics in Belarus and showed increases between 1990 and 1994 of:

- disorders of the nervous system 43 %
- cardiovascular diseases 43 %
- gastrointestinal diseases 28 %
- disorders of bone, muscle and connective tissue 62 %
- diabetes 28 %

It is difficult to be sure how many of these diseases were caused by Chernobyl. Children have been evacuated from the contaminated areas to live in Minsk and other cities in the cleaner parts of the country, and their health problems are not always carefully followed up. And contaminated food is distributed around the country also, making it difficult to compare children from contaminated and cleaner areas.

It has been reported that the incidence of juvenile-onset diabetes is markedly higher in the contaminated parts of the country, compared to the period before the accident. In the scientific literature, it has been suggested that this could be a consequence of exposure of the pancreas to radioactive iodine.

Scientists in Belarus have looked at the build up of caesium in the organs of the body, particularly the heart, and concluded that this could account for the recorded rises in heart disease in both children and adults..

The effects of radiation on pregnancy

The rapidly dividing cells of a foetus are particularly prone to damage from radiation.

Within a short time after the nuclear disaster, a sharp increase in reproductive disorders – predominantly affecting pregnancy – was seen in Ukraine and Belarus. For the 1986-1990 period, the Ministry of Health in Ukraine recorded an increased number of miscarriages, premature births and stillbirths, as well as three times the normal rate of deformities and developmental abnormalities in newborns

General Health of the population

There is no doubt among national and international experts that the state of health of the people in the contaminated territories is extremely poor. But a number of other causes are cited besides the radiation: poverty, poor diet and living conditions.

Many of the children who do not have serious illness, nevertheless have damaged immune systems. In the more serious cases, rogue antibodies attack the body in what is known as an autoimmune response. They fail to recognise the body's own tissue and treat it as an enemy in the same way that normal antibodies attack foreign infections.

After the Chernobyl disaster, a massive increase in non-malignant diseases was also observed in the population," wrote the German specialist in radiation medicine Edmund Lengfelder 15 years after the accident. The Ukrainian

government agency Chernobyl Interinform in Kiev reported in March 2002 that 84 per cent of the three million people in Ukraine who had been exposed to radiation were registered as sick. These include one million children. For more detailed information about the effects of the accident on human health, follow these links:

See the link below to watch a video of Linda Walker giving a speech about Chernobyl health effects in 2012:

<http://januk.org/blogpages/602report.html>