



4,000 Chernobyl deaths?

<https://arctichealth.org/en/permalink/ahliterature26163>

Source: Nature. 1987 Feb 12-18;325(6105):569

Language: English

Publication Type: Article

Keywords: Accidents

Humans

Neoplasms - mortality

Nuclear Reactors

Ukraine

PubMed ID: 3808056 [View in PubMed](#) 

[4 years after Chernobyl: medical repercussions]

<https://arctichealth.org/en/permalink/ahliterature25355>

Author: D. Hubert
Source: Bull Cancer. 1990;77(5):419-28
Date: 1990
Language: French
Publication Type: Article
Keywords: Abnormalities, Radiation-Induced - epidemiology
Abortion, Habitual - epidemiology
Blood Cell Count
Bone Marrow Transplantation
Decontamination - methods
Diarrhea - etiology
English Abstract
Europe
Female
Humans
Male
Nuclear Reactors
Pregnancy
Prognosis
Psychophysiologic Disorders - etiology
Pulmonary Fibrosis - etiology
Radiation Dosage
Radiation Injuries - complications - epidemiology - therapy
Skin - radiation effects
Triage
Ukraine

Abstract: The nuclear accident at Chernobyl accounted for an acute radiation syndrome in 237 persons on the site. Triage was the initial problem and was carried out according to clinical and biological criteria; evaluating the doses received was based on these criteria. Thirty one persons died and only 1 survived a dose higher than 6 Gy. Skin radiation burns which were due to inadequate decontamination, greatly worsened prognosis. The results of 13 bone marrow transplantations were disappointing, with only 2 survivors. Some time after the accident, these severely irradiated patients are mainly suffering from psychosomatic disorders, in the USSR, some areas have been significantly contaminated and several measures were taken to mitigate the impact on population: evacuating 135,000 persons, distributing prophylactic iodine, establishing standards and controls on foodstuff. Radiation phobia syndrome which developed in many persons, is the only sanitary effect noticed up to now. Finally, in Europe, there was only an increase in induced abortions and this was totally unwarranted. If we consider the risk of radiation induced cancer, an effect might not be demonstrated.

PubMed ID: 2205311 [View in PubMed](#) 

The 6th Klaas Breur memorial lecture, 1987. The Chernobyl accident--impact Western Europe.

<https://arctichealth.org/en/permalink/ahliterature25858>

Author: H. Svensson
Author Affiliation: Radiation Physics Department, University of Umeå, Sweden.
Source: Radiother Oncol. 1988 May;12(1):1-13
Date: May-1988
Language: English
Publication Type: Article
Keywords: Accidents
Cesium Radioisotopes - analysis
Dose-Response Relationship, Radiation
Europe
Food Contamination, Radioactive - analysis
Humans
Iodine Radioisotopes - analysis
Neoplasms, Radiation-Induced - epidemiology
Nuclear Reactors
Radioactive fallout - analysis
Research Support, Non-U.S. Gov't
Risk factors
Sweden
Ukraine

PubMed ID: 3406451 [View in PubMed](#) 

15 years after Chernobyl: new evidence of thyroid cancer.

<https://arctichealth.org/en/permalink/ahliterature19395>

Author: Y. Shibata
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Source: Lancet. 2001 Dec 8;358(9297):1965-6


Date: Dec-8-2001

Language: English

Publication Type: Article

Keywords: Accidents, Radiation
Adolescent
Byelarus - epidemiology
Child
Female
Humans
Male
Mass Screening
Neoplasms, Radiation-Induced - epidemiology
Nuclear Reactors
Population Surveillance
Radioactive fallout
Research Support, Non-U.S. Gov't
Thyroid Neoplasms - epidemiology - etiology
Ukraine - epidemiology

Abstract: The Chernobyl nuclear power plant accident happened on April 26, 1986. We investigated the cause of the striking increase in frequency of thyroid cancer in children who lived within a 150 km radius of Chernobyl and who were born before and after the accident. No thyroid cancer was seen in 9472 children born in 1987-89, whereas one and 31 thyroid cancers were recorded in 2409 children born April 27, 1986, to Dec 31, 1986, and 9720 born Jan 1, 1983, to April 26, 1986, respectively. Short-lived radioactive fallout caused by the Chernobyl accident probably induced thyroid cancer in children living near Chernobyl.

PubMed ID: 11747925 [View in PubMed](#) 

131I dose to the human fetal thyroid in the Zagreb district, Yugoslavia, from the Chernobyl accident.

<https://arctichealth.org/en/permalink/ahliterature65399>

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Source: Int J Radiat Biol. 1988 Aug;54(2):167-77


Date: Aug-1988

Language: English

Publication Type: Article

Keywords: Accidents
Female
Humans
Iodine Radioisotopes - metabolism
Maternal-Fetal Exchange
Nuclear Reactors
Pregnancy
Radiation Dosage
Radioactive fallout
Thyroid Gland - metabolism
Ukraine
Yugoslavia

Abstract: The 131I activity was measured in 30 human fetal thyroids in Zagreb district after the Chernobyl accident. A model of radioiodine metabolism in the mother and human fetus which takes into account the age dependence of the uptake and retention of radioiodine in the fetal thyroid was developed. Having assessed that the total intake by the average mother was about 1330 Bq, a good correlation between calculated and measured fetal thyroid activities was found ($r = 0.77$, P less than 0.001). The fetal thyroid dose reached the maximum of 0.43 micro Gy/Bq intake at about the fifth month of gestation. It was concluded that the risk of having a child with a harmful trait due to 131I absorbed by the mother was negligible.

PubMed ID: 2900274 [View in PubMed](#) 

137Cs concentration among children in areas contaminated with radioactive fallout from the Chernobyl accident: Mogilev and Gomel oblasts, Belarus.

<https://arctichealth.org/en/permalink/ahliterature35663>

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Source: Health Phys. 1994 Sep;67(3):272-5

Date: Sep-1994

Language: English

Publication Type: Article

Keywords: Accidents
Adolescent
Cesium Radioisotopes - analysis
Child
Child, Preschool
Environmental Exposure
Female
Humans
Male
Nuclear Reactors
Research Support, Non-U.S. Gov't
Ukraine
Whole-Body Counting

Abstract: The level of radiation exposure in children in Belarus caused by the Chernobyl accident was investigated on the basis of whole body ¹³⁷Cs count. The subjects were 10,062 children (4,762 boys and 5,300 girls) in Mogilev and Gomel, Belarus, who received Chernobyl Sasakawa Health and Medical Cooperation Project health examinations from May 1991 to December 1992 and who were 5-16 y old at the time of examination. The median whole body ¹³⁷Cs count per body weight varied from 21-48 Bq kg⁻¹ and from 28-126 Bq kg⁻¹ in Mogilev oblast and Gomel oblast, respectively. (The "oblast" is the largest administrative district constituting the country. Belarus consists of 6 oblasts). Corresponding annual effective dose equivalents were all less than the public dose limit of 1 mSv y⁻¹, but the observed levels in the children were considerably higher than the average level of 2.3 Bq kg⁻¹ reported in the past for the former Soviet Union.

Notes: Comment In: Health Phys. 1995 May;68(5):733-57730075

PubMed ID: 8056594 [View in PubMed](#) 

137Cs concentrations in lichens before and after the Chernobyl accident

<https://arctichealth.org/en/permalink/ahliterature102073>

Author: Hofmann, W
Attarpour, N
Lettner, H
Türk, R

Source: Health Physics. 1993 Jan;64(1):70-73

Date: Jan-1993

Language: English

Publication Type: Article

Keywords: Accidents
Austria
Cesium Radioisotopes--analysis
Lichens--chemistry
Nuclear Reactors
Radioactive Fallout--analysis
Ukraine

Abstract: 137Cs activities were measured in a variety of epigeic and epiphytic lichens in Austria before and after contamination by the Chernobyl fallout. For comparison, the activity of the naturally occurring 40K was also determined in each lichen sample. The high 137Cs activities found after Chernobyl suggest that lichens are suitable and inexpensive biological detectors of the fallout pattern.

The 1986 and 1988 UNSCEAR (United Nations Scientific Committee on the Effects of Atomic Radiation) reports: findings and implications.

<https://arctichealth.org/en/permalink/ahliterature25247>

Author: F A Mettler
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Source: Health Phys. 1990 Mar;58(3):241-50

Date: Mar-1990

Language: English

Publication Type: Article


Keywords: Accidents
Background Radiation
Environmental Exposure
Female
Humans
Japan
Neoplasms, Radiation-Induced
Nuclear Reactors
Pregnancy
Prenatal Exposure Delayed Effects
Radiation Dosage
Radiation Genetics
Radiation, Ionizing
Risk
Ukraine

Abstract: The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) has published a substantive series of reports concerning sources, effects, and risks of ionizing radiation. This article summarizes the highlights and conclusions from the most recent 1986 and 1988 reports. The present annual per person effective dose equivalent for the world's population is about 3 mSv. The majority of this (2.4 mSv) comes from natural background, and 0.4 to 1 mSv is from medical exposures. Other sources contribute less than 0.02 mSv annually. The worldwide collective effective dose equivalent annually is between 13 and 16 million person-Sv. The Committee assessed the collective effective dose equivalent to the population of the northern hemisphere from the reactor accident at Chernobyl and concluded that this is about 600,000 person-Sv. The Committee also reviewed risk estimates for radiation carcinogenesis which included the new Japanese dosimetry at Hiroshima and Nagasaki. These data indicate that risk coefficient estimates for high doses and high dose rate low-LET radiation in the Japanese population are approximately 3-10% Sv⁻¹, depending on the projection model utilized. The Committee also indicated that, in calculation of such risks at low doses and low dose rates, a risk-reduction factor in the range of 2-10 may be considered.

PubMed ID: 2312289 [View in PubMed](#) 

The accident at Chernobyl and outcome of pregnancy in Finland.

<https://arctichealth.org/en/permalink/ahliterature65309>

Author: M. Joffe
Source: BMJ. 1989 May 20;298(6684):1384
Date: May-20-1989
Language: English
Publication Type: Article
Keywords: Accidents
Female
Finland
Humans
Nuclear Reactors
Pregnancy
Pregnancy outcome
Ukraine
Notes: Comment On: BMJ. 1989 Apr 15;298(6679):995-72499391
PubMed ID: 2502266 View in PubMed 

The accident at Chernobyl and outcome of pregnancy in Finland.

<https://arctichealth.org/en/permalink/ahliterature38150>

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Source: BMJ. 1989 Apr 15;298(6679):995-7
Date: Apr-15-1989
Language: English
Publication Type: Article

Keywords: Abnormalities, Radiation-Induced - epidemiology - etiology
Accidents
Cohort Studies
Female
Finland
Geography
Humans
Infant mortality
Infant, Newborn
Infant, Premature
Nuclear Reactors
Pregnancy
Pregnancy outcome
Radioactive Fallout - adverse effects
Time Factors
Ukraine

Abstract: OBJECTIVE--To evaluate the outcome of pregnancy in Finnish women after the accident at the Chernobyl nuclear power plant on 26 April 1986. DESIGN--Geographic and temporal cohort study. SETTING--Finland divided into three zones according to amount of radioactive fallout. SUBJECTS--All children who were exposed to radiation during their fetal development. Children born before any effects of the accident could be postulated--that is, between 1 January 1984 and 30 June 1986--served as controls. INTERVENTIONS--Children were divided into three temporal groups: controls, children who were expected to be born in August to December 1986, and children who were expected to be born in February to December 1987. They were also divided, separately, into three groups according to the three geographic zones. END POINT--Incidence of congenital malformations, preterm births, and perinatal deaths. MEASUREMENTS AND MAIN RESULTS--There were no significant differences in the incidence of malformations or perinatal deaths among the three temporal and three geographic groups. A significant increase in preterm births occurred among children who were exposed to radiation during the first trimester whose mothers lived in zones 2 and 3, where the external dose rate and estimated surface activity of caesium-137 were highest. CONCLUSIONS--The results suggest that the amount of radioactive fallout that Finnish people were exposed to after the accident at Chernobyl was not high enough to cause fetal damage in children born at term. The higher incidence of premature births among malformed children in the most heavily polluted areas, however, remains unexplained.

Notes: Comment In: BMJ. 1989 May 20;298(6684):13842502266

PubMed ID: 2499391 [View in PubMed](#) 