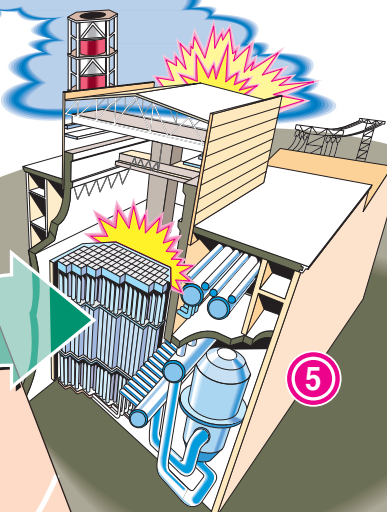


Chernobyl's deadly legacy

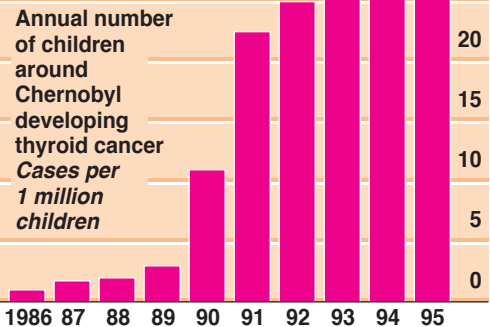
When reactor No 4 at Chernobyl nuclear power station exploded on Saturday, 26 April 1986, the radioactivity released was over ten times more powerful than that unleashed at Hiroshima. While the bulk of the heavy uranium and plutonium derivatives stayed in the reactor or fell locally, radioactive plumes drifted 2,500km across the Soviet Union, Europe and Scandinavia

How the radioactive clouds spread

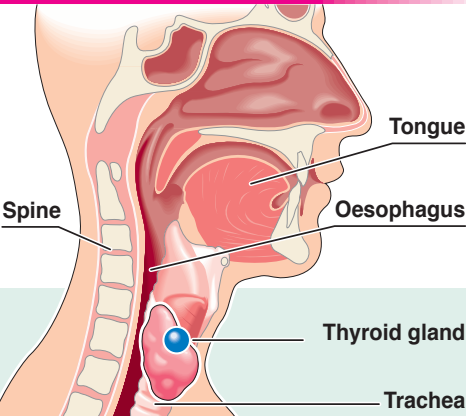
1. Riding on south-westerly winds at an altitude of 1,500m, the first cloud spreads towards Scandinavia. It is detected over Sweden on Sunday, April 27
Moscow does not admit to the disaster until Monday night



2. Radioactive plumes spread westward on April 27, reaching as far as Italy and Britain by Friday, May 2. On May 6, government officials advise people in Scotland and Wales not to drink rainwater. High levels of radioactive iodine-131 are found in milk in Northern Ireland, Scotland and Cumbria
3. On April 27 a 2,800 square kilometre exclusion zone is fenced off around Chernobyl and the evacuation of 135,000 inhabitants begins. On April 28, radiation spreads eastwards across Russia
4. On April 29/30 the cloud changes direction once again
5. On May 9 the reactor core – still burning at 2500°C – collapses through the floor of the containment building and releases a further cloud of radioactive dust into the atmosphere



The victims of Chernobyl



Acute radiation syndrome – 237 people receive severe radiation burns. 28 operating staff and firefighters die within weeks

Thyroid cancer – More than 12,000 children receive large doses of radiation. This includes radioactive iodine-131 – an isotope which is quickly absorbed by the thyroid gland. Children exhibit enlarged thyroids, changes to blood constituents, and damage to liver, pancreas and intestines as well as skin burns and bronchitis. Treatment requires surgical removal of the entire thyroid gland. Hormone supplements are usually necessary for the rest of the patient's life. From 1981-5 the average rate of thyroid cancers in Gomel, Belarus, was 0.5 per million children per year. Currently it exceeds 100 per million

Thyroid gland – secretes three hormones essential for normal physical growth and mental development

- Thyroxine and Triiodothyronine: Iodine-containing hormones
- Calcitonin: Controls calcium level in blood. Crucial for bone growth