An appropriate response to any radiological emergency

IRSN mobilizes its expertise and intervention resources according to the severity of the situation.

Confirmed or suspected emergency

At the request of public authorities (safety authorities, prefectures, town halls...), industrials, physicians, third countries and international organizations, the IRSN is immediately mobilizable to:

- Confirm the radiological nature of the event;
- Characterize the risks of human and environment exposure;
- Secure the scene of the incident and recommend the implementation of preventive and protective measures;
- Characterize the exposure of involved people.

National nuclear crisis organization

IRSN puts its expertise at the service of the National Nuclear Crisis Organization by setting up its Technical Crisis Center. Teams of experts are in a position to provide an assessment of the situation and of the consequences for human and the environment, to put in place the necessary means. IRSN is a WHO Collaborating Center for Radiological Protection.

For more information, please consult the IRSN website: www.irsn.fr/EN

Technical Crisis Center mobilizable in less than one hour, 24/24, with the support of 40 experts.

A fleet of mobile facilities, unique in Europe, capable of responding to any radiological emergency involving internal contamination with gamma emitters, with an on-site measurement capacity of up to 2,500 people per day.

An appropriate response to any radiological emergency

A wide technical capacity and expertise to face any accidental exposure to ionizing radiation

The French Institute for Radiological Protection and Nuclear Safety

IRSN is a public organization with industrial and commercial activities (EPIC).

IRSN’s missions have been consolidated by the Act No. 2015-992 of 17 August 2015 concerning Energy Transition and Green Growth (TECV). IRSN is the national public expert on nuclear and radiological risks.

IRSN contributes to public policies in the fields of nuclear safety and ionizing radiation protection for public health and environment. As a research and scientific organization it acts in consultation with all stakeholders concerned by these policies, while preserving its independence of judgment.

IRSN is placed under the joint authority of the Ministry of Environment, Energy and Marine Affairs, the Ministry of Education, Higher Education and Research, the Ministry of Social Affairs and Health, the Ministry of Defense.
Experts and specific means to assist in diagnosis, prognosis and to guide the therapeutic strategy

In case of external irradiation
The assessment of the exposure and/or retention of radionuclides in the organism makes possible the calculation of the committed effective dose received by the contaminated individual.

In vitro measurements

In vivo measurements

In case of internal contamination
The assessment of the excretion and/or retention of radionuclides in the organism makes possible the calculation of the committed effective dose received by the contaminated individual.

The γ and x-ray emitters are measured to determine the total activity present in the body or in a target organ. This measure can be carried out on the IRSN’s fixed or mobile facilities. The X and gamma emitters are measured in excreta (urine and feces). Unlike direct measurement, the results may not be available immediately; however, the measurement can be performed whether or not the sample should be stored.

Recommended treatments
Local or External gamma emitters.
• To prevent the accumulation of iodine in the thyroid: potassium iodide (KI).
• To increase excretion of radionuclides: DTPA (Pu, Am);
• To decrease the absorption of radionuclides: Prussian blue (Cs, Th);
• To undress and shower the contaminated person;
• To assess the excretion and/or retention of radionuclides in the organism; these results make possible the calculation of the committed effective dose received by the contaminated individual.

The assessment of the excretion and/or retention of radionuclides in the organism makes possible the calculation of the committed effective dose received by the contaminated individual.

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