Nuclear waste as a public health challenge

In the past decade, nuclear power has gone from being the world’s fastest growing energy source to be the slowest. However, there are still more than 400 nuclear reactors working around the world (25% of them in the USA), and some countries produce an important proportion of their electricity from nuclear plants. France is a leader in this ranking, producing 75% of its electric power from nuclear sources. It seems that the worldwide trend in the use of nuclear power and hence in the production of nuclear waste is clearly downwards. Despite this, both the fear of the public to the real or perceived risks, and the effects of the nuclear waste pollution will remain with us as a public health problem for many years ahead.

This issue of *JECH* reports a statistically significant increase in the risk of acute lymphoblastic leukaemia among children living 10 km around the La Hague (France) nuclear waste reprocessing plant. This is not a new story, similar results although less convincing—because of smaller samples—were obtained by epidemiologists exploring the effects of such a plants in Sellafield (England, 1986) and in Dounreay (Scotland, 1986). The same plant in La Hague was even linked to an increased risk of cancer by two studies published in the 1990s by the *BMJ*. The current report we publish adds statistical and clinical precision to the previous findings and gives histopathological confirmation. This is an important step forward.

The community context of this study is also important. As Dr A V Guizard and colleagues explain in their paper the Nord Contentin region of France has a particularly high density of nuclear installations having at 20 km from each other a military arsenal, a nuclear power station and the nuclear waste reprocessing plant under study. It is not difficult to imagine the anxiety and need for public policy solutions perceived for this population. Especially after 12 years of published studies on the same area with increasingly positive results.

The debate on the use of nuclear power usually investigates the impact on health of accidental and acute emissions of radioactivity. For a variety of reasons, of which the extreme difficulty of ascertaining that the cause-effects relation is not negligible, persistent low dose emissions are not taken much into account. The paper from Guizard could be considered as a pertinent contribution on the relation between acute lymphoblastic leukaemia and nuclear waste plants. And it should be of concern to any public health practitioner who has a plant like this in their district.

In France or outside France.

CARLOS ALVAREZ-DARDET
Editor

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**Speaker’s corner**

What can doctors do to reduce health inequalities?

1. Accept that inequalities in health do exist, and are an important health problem both in the developed and developing world.
2. Accept that any force affecting health irrespective of its biological or social origin is in the professional domain of medicine.
3. Accept and recognise the complementary nature of the informal care sector and its role in shaping health inequalities.
4. Develop a clinical practice sensible to social class, gender and ethnicity issues, exploring how the affirmative action principles could be applied to clinical practice.
5. Examine how clinical practice and protocols can reduce health inequalities, identifying ways of ameliorating the effects of inequalities in health within their clinical practice.
6. Perform qualitative research to better understand the effect of social stratifying processes on the outcome of their clinical practice.
7. Perform quantitative research (randomised controlled trials) to assess the potential effect of clinical interventions aimed to reduce health inequalities.
8. Participate in alliances aimed to produce healthy settings like initiatives in domestic environments, schools, cities and workplaces.
9. Don’t forget that doctors in their practice may produce gender bias (more therapeutic efforts in men than in women for the same health problem)—even unconsciously.
10. Learn how to develop partnerships with the mass media to raise the issue of health inequalities in the social and political agendas.

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