

A clear scientific account of the effect of radiation on life

Learn why a little nuclear radiation is harmless and that in a world of other dangers -- earthquakes, global warming, economic collapse, shortages of power, food and water -- the pursuit of the lowest possible radiation levels is in nobody's best interest. Levels should be permitted as high as is relatively safe (AHARS), rather than kept as low as is reasonably achievable (ALARA).

For more than half a century the view that radiation represents an extreme hazard has been accepted. This book challenges that view by facing the question **How dangerous is ionising radiation?** Briefly the answer is that radiation is about a thousand times less hazardous than suggested by current safety standards.

For many this will come as a surprise and then quickly raise a second question **Why are people so worried about radiation?** This is the out-of-date result of Cold War politics combined with a concern about radiation that was appropriate in an earlier age when the scientific understanding was limited.

In the book these answers are explained in accessible language and related directly to modern scientific evidence and understanding, for instance the high levels of radiation used to the benefit of health in every major hospital.

Four facts illustrate the need for a new understanding.

1. The radiation levels in the nuclear waste storage hall at **Sellafield**, UK are so low that anyone would have to stay there for a million hours to receive the same dose that any patient on a course of radiotherapy treatment receives to their healthy tissue in a single day.
2. The radiation dose experienced by the survivors of the **Hiroshima** and **Nagasaki** bombs caused 0.6% to die of radiation-induced cancer between 1950 and 2000, that is about 1/20 of the chance of dying of cancer anyway and less than the chance of being killed on US highways in that period.

3. The wildlife at **Chernobyl** today is reported to be thriving, despite being radioactive.
4. The mortality of **UK** radiation workers before age 85 from all cancers is 15-20% lower than comparable groups.

The case for a complete change in attitude towards radiation safety is unrelated to the effects of climate change. But the realisation that radiation and nuclear energy are much safer than is usually supposed is of extreme importance to the current discussion of alternatives to fossil fuels and their relative costs. Since the book was published the point has been underlined by events in Japan where 25,000 died from the tsunami but nobody died from radiation (nor will they).

Of the safety of radiation and nuclear technology, the author says "*I have no axe to grind, I have no links with the industry, I just want to see the truth out there. So many people have been under a misapprehension for so long. The book is based on recent scientific data that is now established, and it brings good news – but are the people of the world ready to re-examine past assumptions in the light of current science? It is important that they do, because, without nuclear energy, the future for mankind looks bleak.*"