


Literature review on the health impacts of exposure to ionising radiation

For veterans and their families of J-Force, Operation Grapple, and Mururoa.

In April 2021 the Minister for Veterans asked the Veterans' Health Advisory Panel to review the most up-to-date information on the health impacts of exposure to nuclear radiation on veterans and their descendants.

 Read the complete Literature Review on Health Impacts of Ionising Radiation [PDF, 1.6 MB]
(<https://www.veteransaffairs.mil.nz/assets/Research/Literature-Review-on-Health-Impacts-of-Ionising-Radiation.pdf>)

The request also asked the Panel for their views on whether their findings would suggest a change to the approach that New Zealand currently takes to these veterans and their families.

The Panel engaged Allen and Clarke Consulting to undertake a systematic literature review. They began in May 2022.

Their initial focus was on military populations only, but later the project was re-scoped to include the significantly larger body of evidence from civilian exposures.

The purpose of this review was to establish whether the most up-to-date evidence indicates whether there are implications not previously identified for veterans who may have been exposed to ionising radiation and whether New Zealand should change its approach to these veterans and their families.

Acknowledged challenges

In the report, Allen and Clarke Consulting noted that there's not a simple relationship between exposure events and effects.

For example, determining levels of ionising radiation is complex — including what is measured, how it is measured, what units are used, what organs are studied, whether the dose received was low, medium or high, and whether exposure was chronic or acute.

Also, there are more studies available on mortality (death from radiation) than morbidity (having a disease or medical condition as a result of exposure) and the level of detail in reports varies.

The overall conclusions of the literature review

The review concluded:


- there is strong and well-documented evidence confirming the impact of radiation on non-solid cancers, and solid cancers, including a number of site-specific solid cancers
- there is considerable evidence of the psychological effects of exposure, and there are more diverse findings in relation to other non-cancer effects

- there is mixed evidence about health effects from genetic alterations in adults exposed to ionising radiation and none of the studies that were reviewed reported statistically significant findings about the effects on the descendants of people exposed to ionising radiation.

Summary of recommendations

The Panel recommends that:

- no new conditions need to be added to the current list of conclusively presumed conditions that apply to those exposed to nuclear radiation (the Presumptive List)
- consideration be given to extending the entitlements that are currently available only to the children of Operation Grapple veterans to the children of Jayforce and Mururoa veterans
- consideration is given to repeating a review on the health impacts of exposure to nuclear radiation every seven to ten years (unless a major new study provides grounds for earlier review).

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 Report of VHAP to the Minister for Veterans — March 2023 [PDF, 387 KB]
(<https://www.veteransaffairs.mil.nz/assets/Research/Report-of-VHAP-to-the-Minister-for-Veterans-March-2023.pdf>)

Date

06 July 2023

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Last Modified: 6 July 2023