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Impact of the NRPB reports on the Secretary of State's normal War Pensions policy

The War Pensions Scheme provides no-fault compensation for disorders causally linked to service before 6 April 2005. Claims may be made by anyone who has served, for any disablement and at any time from service termination. It is important to note that the onus and standard of proof are not based on the balance of probabilities. For claims made within 7 years of service termination, there is no onus on the claimant and an award will be paid unless the Department can show beyond reasonable doubt that service has played no part in cause or course for claims. After 7 years, which will include most claims raised by nuclear test veterans, it is for the claimant by reliable evidence to raise a reasonable doubt. An award will be paid provided that reliable evidence raises a reasonable doubt that service has caused or worsened the claimed condition. Each case is considered on its merits. However, for nuclear test veterans some claims can be automatically accepted if diagnosis of certain conditions is confirmed and the person is shown to be a nuclear test participant (as defined on page 2 below).

Based on the first NRPB report, the Secretary of State's normal policy became to award a war pension for claims for leukaemia (other than chronic lymphatic leukaemia) and multiple myeloma in those present at test sites. The policy also included awards for primary polycythaemia rubra vera, the red blood cell equivalent of leukaemia. In light of the 1993 report, which no longer suggested an excess of multiple myeloma, the Secretary of State's normal war pensions policy was revised. Since then, on the basis of presence at atmospheric nuclear test sites, new claims for multiple myeloma are rejected but awards continue to be made for leukaemia (other than chronic lymphatic leukaemia) and primary polycythaemia rubra vera having clinical onset within 25 years of first presence at the test sites. On the basis of the findings of the 2003 report, the Secretary of State's current normal war pensions policy remains unchanged .

The reports did not causally link development of those conditions to ionising radiation exposure and the policy is not an acknowledgement that those present at the tests were exposed to harmful levels of ionising radiation. The accepted service link is purely presence at the test sites.

The Secretary of State is of the opinion that the reports do not provide reliable evidence to raise a reasonable doubt that other cancers (e.g. liver and bladder) might be attributable to service in the armed forces because of presence at the nuclear test sites. Consequently it is his normal war pensions policy that awards may not be made for solid cancers on the basis of presence at atmospheric nuclear test detonations or clean-up operations alone. However, an award of war pension may be made for cancer in any case where there is reliable evidence of service exposure to a sufficient level of ionising radiation and there is a recognised causal link between the claimed condition and such accepted exposure.

Children of test participants

The sample on which the 1988, 1993 and 2003 NRPB reports was based did not include the children of test participants. The study was solely concerned with the test participants themselves and not with any possible effect their participation might have had on their progeny.

Any claim for compensation for a child in respect of disablement or death said to be due to the parent's participation in the UK tests would fall outside the scope of the War Pensions Scheme.

Position of civilian test participants e.g. MOD civilian employees

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Compensation for civilians or their widows employed by the MOD who participated in the tests and who claim that disablement or death is due to participation is similarly not covered by war pensions legislation. In addition to civil action against MOD, there would be the possibility of a successful claim to Industrial Injuries Benefit under the Industrial Injuries Scheme administered by the DWP. MOD civilian employees are also covered by the Compensation Scheme for Radiation Linked Disease.

Cases falling outside the general policy guidelines

Reference to the Secretary of State's "normal policy" indicates that the policy is not a rigid one. The merits of each individual case are considered and discretion used when deciding whether to make a payment.

Compensation

Direct comparisons between pension and compensations schemes in other countries and our system are difficult. The compensation schemes have different underlying principles and assumptions, and must be viewed in the context of very different general social welfare provisions that are available in other countries.

The policy of other countries, such as the USA and New Zealand, to award NTVs compensation is a matter for their governments and therefore the British Government cannot comment. The Ministry of Defence has consistently taken the position that we have every confidence in the independent NRPB studies which informed the normal policy to award war pensions for leukaemias (other than chronic lymphatic leukaemia) with onset within 25 years of participation, and based on participation alone. There are no grounds for compensation to be paid generally to British NTVs. However, where individual veterans are able to produce reliable evidence to raise a reasonable doubt that their illness is related to their service, they are entitled to a War Disablement Pension. War Pensions are paid by the Service Personnel and Veterans Agency (SPVA) and are non-discretionary, not means-tested and are made on a no-fault, tax-free and retrospective basis. They are uprated annually. The SPVA also makes provision for the widows of Service and ex-Service personnel whose death is attributable to service in the form of a War Widows Pension. The SPVA can be contacted free of charge on 0800 169 22 77.

The NRPB nuclear test follow-up studies

As a result of concern amongst some test participants about the effects that participation could have had on their health, in 1983 the Ministry of Defence commissioned an independent study by the NRPB to investigate whether the health of participants showed any correlation with radiation exposure.

This comprehensive cohort study compared the mortality and cancer incidence in over 20,000 test participants with those of a similarly-sized control group of ex-servicemen who had not participated in the test programme.

The term 'test participant' has a particular definition in this context and includes servicemen present at the due dates, at any of the following test sites and experimental programmes.

Operation	Site	Date
Hurricane	Monte Bello W Australia	April 1952-June 1956

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Mosaic		
Totem	Emu Field S Australia	August 1953-August 1957
Buffalo Antler Minor trials	Maralinga S Australia	April 1955-August 1967
Grapple X Y Z Brigadoon	Christmas Island S Pacific	June 1956-June 1964
Grapple	Malden Island S Pacific	October 1956-June 1964
	RAAF Pearce W Australia	May-August 1956
	RAAF Edinburgh S Aust.	Aug1956-Nov 1960

There is no requirement for presence at actual detonations.

At the RAAF sites the work included sampling and handling contaminated aircraft. RN ships were associated with tests at Monte Bello, Malden and Christmas Island. The Minor trials did not involve nuclear detonations and took place at Maralinga (Tims, Rats and Vixen A and B) and at Emu Field (Kittens). Major clean-up operations took place at Christmas Island in 1964 and Maralinga in 1964 and 1967.

The main conclusions of the first NRPB Report (Darby et al 1988) were that being present at the nuclear weapons test sites was associated with a slight risk of multiple myeloma and leukaemia (other than chronic lymphatic leukaemia) compared with a matched control-group of service personnel who were not present. This was not considered to be due to ionising radiation exposure. There was a particularly low rate of the conditions in the controls compared with the equivalent civilian general population. In addition, those sub-groups among the nuclear test veterans known to be the most highly radiation-exposed did not show the highest rates of the conditions.

Otherwise presence at the sites:

- did not have a detectable effect on the participants' expectation of life, and
- did not have a detectable effect on participants' risk of developing any other malignancy.

The study was extended and the second NRPB Report (Darby et al 1993) produced an additional seven years' data. It:

- confirmed the overall conclusion of the 1988 report, that participation in the tests had no detectable effect on the participants' expectation of life nor on their risk of developing most cancers;
- concluded that the small hazard of multiple myeloma suggested by the 1988 report was not supported by the additional data, although the possibility of some small risk of developing leukaemia (other than chronic lymphatic leukaemia) in the first 25 years after participation could not be ruled out.

With regard to other cancers the report concluded that:

- overall the number of deaths and cancer incidence amongst participants is lower than within the control group;

- as expected because a large number of diseases were considered, any excesses in participants are due to chance.

Following pressure for a further investigation into the alleged effects of exposure, a third NRPB study was commissioned. The report of this study, which extended the follow-up period to 1998, was published in February 2003 (Muirhead et al 2003). The report:

- reaffirmed the overall findings of the 1988 & 1993 reports that participation in the tests had no detectable effect on the participants' expectation of life nor on their risk of developing most cancers;

- confirmed the conclusion of the 1993 report on the alleged association between participation in the UK test programme and multiple myeloma, that there is no evidence to support a link;

- suggested, particularly 2–25 years after first test participation, a small increase in the risk of leukaemia (excluding chronic lymphatic leukaemia) among test participants relative to controls, although the difference in rates between the two groups is narrowing with longer follow-up.

The National Radiological Protection Board (NRPB) reports, of which a principal author was Sir Richard Doll, are in general highly regarded by the scientific community. Positive reactions include comment from Professor John Kaldor of New South Wales (Kaldor 1999) and the US Presidential Advisory Committee on Human Radiation Experiments (Thomas 1998).

In particular the following points are noted:

- The study identified the test participants, and followed them up to monitor the occurrence of disease and death in the participant population. It then compared this, over the same time period with the rates in both a service and civilian control population.

- The study involved 20,000 participants and an equal number of controls

- The reports describe in detail the efforts made to ensure sample completeness and to control bias.

- The study limitations are discussed by the authors and conclusions are reasoned and restrained.

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Glossary

Absorbed dose See **dose.**

Acute radiation syndrome (ARS) The onset, within hours of high **dose** whole body **irradiation,** of nausea and vomiting followed by destruction and diminished (or absent) replacement of essential blood cells resulting in vulnerability to serious infection and bleeding; recovery is possible but with increasing **doses** these effects are more severe and death is more likely.

Alpha particle A particle consisting of two protons plus two neutrons; emitted by a radionuclide.

Background radiation **Ionising radiation** from naturally occurring **radionuclides** both in the environment (from soil, rock and building materials and from space – cosmic radiation) and in the body.

Beta particle An electron emitted by the nucleus of a radionuclide. The electric charge may be positive, in which case the beta particle is called a positron.

Contamination The suspension in air or deposition of **radionuclides** upon, or in, the ground, water and other surfaces, and personnel and equipment

- **External contamination** Of a person or equipment - deposition, general or localised, of **radionuclides** upon all or any of clothing, hair, skin and/or equipment
- **Internal contamination** Of a person - deposition within the body, usually by inspiration, by ingestion or sometimes through penetration of (usually broken) skin by **radionuclides** which will then **irradiate** the cells of surrounding body tissues.

Cosmic rays High-energy ionising radiation from outer space.

Decay The process of spontaneous transformation of a radionuclide; the decrease in the activity of a radioactive substance.

Dose The amount of **ionising radiation** received, as deduced from the energy absorbed from an external radiation source

- **Absorbed dose** Quantity of energy imparted by ionising radiation to unit mass of matter such as tissue. Unit is the gray, symbol Gy. 1Gy = 1 joule per kilogram
- **Equivalent dose** The quantity obtained by multiplying the absorbed dose by a factor to allow for the different effectiveness of the various ionising radiations in causing harm to tissue. Unit is the sievert, symbol Sv
- **Effective dose** The quantity obtained by multiplying the equivalent dose to various tissues and organs by a weighting factor appropriate to each and summing the products. Unit is the sievert, symbol Sv.

Dosemeter A small device worn on the person to measure absorbed energy and from which a record of **Absorbed Dose** may be obtained.

Dosimetry The estimating, recording and maintaining of records of **dose.**

Emitter A **radionuclide** decays by emission of certain radioactive particles and/or electromagnetic radiation. A particular **radionuclide** may be described as an **alpha** or **beta** or **beta/gamma** emitter.

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Fallout The transfer of radionuclides produced by nuclear weapons from the atmosphere to earth; the material transferred.

Fission products The two, invariably radioactive, fragments remaining after an atom has been split (undergone fission).

Gamma ray A discrete quantity of electromagnetic energy without mass or charge, emitted by a radionuclide; similar to an X-ray but with higher energy.

Ionising radiation Radiation that produces ionisation in matter; examples include alpha particles, gamma rays, X-rays and neutrons. When these radiations pass through the tissues of the body, they have sufficient energy to damage the DNA.

Ionisation The process by which a neutral atom or molecule acquires or loses an electric charge; the production of ions.

Monitoring The process of searching for the presence of radiation and then measuring, reporting and recording radiation **dose rates** found within a given area or on a person.

Neutron A nuclear particle (similar to a proton but without electrical change); emitted during fission and fusion by only a few **radionuclides;** long range (kilometres) in air and highly penetrating; an external **hazard** only at detonation; densely **ionising.**

Non-ionising radiation Radiation that does not produce ionisation in matter; examples include ultraviolet radiation, light, infrared radiation and radiofrequency radiation. When these radiations pass through the tissues of the body they do not have sufficient energy to damage the DNA directly.

Radiation weighting factor (RWF) A factor intended to take account of the relative biological effectiveness of different types of radiation according to both their energies and how densely ionising they are.

Radionuclide An unstable nuclide (atomic nucleus) that emits ionising radiation.

X-ray A discrete quantity of electromagnetic energy without mass or charge, emitted by an X-ray machine; similar to a gamma ray but with lower energy.