Extending the terms of prescription for latex anaphylaxis

Report by the Industrial Injuries Advisory Council in accordance with Section 171 of the Social Security Administration Act 1992 reviewing the terms of prescription for latex anaphylaxis

Presented to Parliament by
the Secretary of State for Work and Pensions
By Command of Her Majesty

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Extending the terms of prescription for latex anaphylaxis

Dear Secretary of State

REVIEW OF PRESCRIBED DISEASE PD B15 – LATEX ANAPHYLAXIS

Anaphylaxis is a serious allergic reaction to latex. It is recognised within the Industrial Injuries Disablement Scheme as Prescribed Disease (PD) B15, but only for occupational exposures encountered in healthcare work. This report makes the case for extending the terms of prescription to cover other occupations where workers are required to wear latex gloves regularly (such as police officers, vehicle mechanics, hairdressers, and workers from the food industry). It follows correspondence from a claimant said to have anaphylaxis from occupational exposure to latex outwith the healthcare sector.

Almost all of the research evidence on natural rubber latex allergy has involved populations of healthcare workers using powdered latex gloves. In this group, the evidence on work causation is very strong. However, our inquiries have identified increased risks in other occupational groups using latex gloves or other latex materials at work and we have been told that latex allergy is only rarely acquired outside the workplace. This suggests that work causation can be presumed with reasonable confidence in *any* claimant who has natural rubber latex anaphylaxis and has regularly been exposed to latex products at work. We recommend, therefore that the prescription for PD B15 be extended to all workers with such occupational contact, as set out in a table to the report.

The issue of natural rubber latex allergy came to prominence in the 1990s, but has very largely been overcome by the use of non-latex alternative medical devices and gloves or, where latex gloves are still used, by the removal of dusting powder (a common route to exposure). Nonetheless, workers who have developed allergy to latex from former exposures may still have their allergy provoked by environmental exposures to latex and be at risk of anaphylaxis.

Fortunately, anaphylaxis from latex is a rare event and the Scheme receives very few claims for PD B15. The Council believes that its recommendations, if accepted, would be very unlikely to result in a large number of new claims.

Yours sincerely

Professor Keith Palmer
Chairman, Industrial Injuries Advisory Council

Summary

1. This Command Paper recommends an extension to the occupational terms of prescription for PD B15, anaphylaxis from latex. At present the prescription is limited to healthcare workers, among whom the evidence for occupational causation is very strong.
2. Here we set out the argument that coverage should encompass *all* employed earners who have acquired latex anaphylaxis during the course of their work, since cases of allergy and anaphylaxis have been shown to occur across a broader range of occupations than provided for by the current terms of PD B15; and since latex allergy appears only rarely to be acquired outside the workplace – i.e. presumption of a work causation is high in *all* workers with regular latex exposure.
3. We recommend that PD B15 be revised to refer to "regular contact with products made with natural rubber latex" (without reference limiting prescription to work in healthcare).
4. Latex anaphylaxis is a rare event and the Council believes that its recommendation if implemented would result in few extra claims to the Scheme.

Background

5. In December 2016 the Council was referred correspondence from a claimant who had been refused benefit under the Industrial Injuries Disablement Benefit (IIDB) scheme following an alleged anaphylactic attack arising from latex allergy.
6. Anaphylaxis due to latex allergy is a prescribed disease within the Scheme (Prescribed Disease (PD) B15), the current terms of prescription being limited to instances in healthcare workers.
7. The correspondent, who had worked in a different occupation, pointed out that regular use of latex gloves is (or has been) an occupational requirement across several other occupations, such as police officers, vehicle mechanics, hairdressers, and workers from the food industry, and that the potential to suffer occupationally-related latex anaphylaxis is more widespread than provided for by the terms of PD B15.
8. The Industrial Injuries Advisory Council has undertaken a review of the prescription. This report describes the nature of anaphylaxis, its causes and prescription, and a recommendation to extend the occupational coverage of PD B15.

The Industrial Injuries Disablement Benefit Scheme

9. The IIDB Scheme provides non-contributory, 'no-fault' benefits for disablement because of accidents or prescribed diseases which arise during the course of employed earners' work. The benefit is paid in addition to other incapacity and disability benefits. It is tax-free and administered by the Department for Work and Pensions.
10. The legal requirements for prescription are set out in The Social Security Contributions and Benefits Act 1992 which states that the Secretary of State may prescribe a disease where he is satisfied that the disease:
    a. ought to be treated, having regard to its causes and incidence and any other relevant considerations, as a risk of the occupation and not as a risk common to all persons; and
    b. is such that, in the absence of special circumstances, the attribution of particular cases to the nature of the employment can be established or presumed with reasonable certainty.
11. Thus, a disease may only be prescribed if there is a recognised risk to workers in an occupation, and the link between disease and occupation can be established or reasonably presumed in individual cases.

The Role of the Industrial Injuries Advisory Council (IIAC)

12. IIAC is an independent statutory body established in 1946 to advise the Secretary of State for Social Security on matters relating to the IIDB scheme. The majority of the Council's time is spent considering whether the list of prescribed diseases for which benefit may be paid should be enlarged or amended.
13. In considering the question of prescription the Council searches for a practical way to demonstrate in the individual case that the disease can be attributed to occupational exposure with reasonable confidence; for this purpose, reasonable confidence is interpreted as being based on the balance of probabilities.
14. An accident at work is specifically catered for within the IIDB scheme. However, if the condition might result from occupational exposure in the absence of an identifiable accident, the Council must consider whether it should be included in the list of diseases that are prescribed for benefit purposes. In these circumstances, it may be possible to ascribe a disease to a particular occupational exposure from specific clinical features of the individual case. For example, the proof that an

individual's asthma is caused by their occupation may lie in its improvement when they are on holiday and regression when they return to work, and in the demonstration that they are allergic to a specific substance with which they come into contact only at work. Latex anaphylaxis is a case in point, fitted to this route of prescription.

Anaphylaxis

15. Anaphylaxis is a severe and potentially life-threatening reaction to an allergy. Symptoms, which develop suddenly and can get worse quickly, include: breathing difficulties, wheezing, clammy skin, a fast heartbeat, confusion, collapse and sometimes an itchy rash or swelling underneath the skin. Anaphylaxis is a medical emergency and can be very serious or even fatal if not treated quickly. It is the result of an over-reaction by the immune system to an allergic agent. A person who is 'sensitised' (develops allergy) to an allergen (an agent capable of causing allergy) may be susceptible to anaphylaxis when exposed again to the same sensitising allergen. Allergy is common, but fortunately anaphylaxis is not.

Natural rubber latex allergy

16. Natural rubber latex (NRL), obtained from the sap of the 'rubber tree' (*Hevea braziliensis*), is an ingredient in a very wide variety of products including many types of rubber gloves. NRL contains around 200 proteins of which around a dozen are recognised to be potential human allergens, capable of inducing a specific, allergic sensitivity. The manifestations of NRL allergy depend on the route through which the original sensitisation occurred and the mode of subsequent exposures.
17. Historically, two subpopulations have been at special risk of NRL allergy: (1) those with long-term or repeated exposures to NRL during personal medical treatment (e.g. patients with indwelling urinary catheters or who have had repeated surgery); and (2) workers routinely wearing or otherwise exposed to NRL-containing gloves during the course of their job. The second of these sub-populations falls within the scope of this report.
18. Until the risk of sensitisation to NRL came to prominence in the 1990s, latex gloves tended to be dusted with corn starch to ease their donning. NRL proteins readily adhere to corn starch and so become airborne and respirable in the powder. Those who developed NRL allergy through exposure to powdered gloves generally

presented to medical care services with asthma and rhinitis, but were at risk also of more generalised allergic responses such as anaphylaxis.

19. In the United Kingdom the occupational group most frequently using powdered NRL gloves was healthcare workers and almost all of the research on NRL allergy is derived from studies in this workforce. Other groups with exposure to powdered NRL gloves have included food processors and handlers, refuse collectors, and those in personal care, security and safety roles.
20. More recently, the issue of sensitization to NRL has very largely been overcome by the use of non-NRL medical devices and gloves or, where NRL gloves continue still to be used, by the removal of dusting powder. However, workers sensitised to NRL as a consequence of prior exposures continue to be at risk of anaphylaxis.

NRL and the Industrial Injuries Advisory Council

21. Diseases attributable to NRL were first discussed by IIAC during its review of the Group B (biological) diseases in 2003 (*Cm 5997: Conditions due to Biological Agents*), at a time when latex allergy was a major concern in the health care sector.
22. Following the Council's review, two changes were made to the schedule of prescribed diseases: (1) NRL was added to the list of causative allergens for occupational rhinitis (PD D4) and occupational asthma (PD D7); and (2) NRL was scheduled as a causative agent for a new prescribed disease, PD B15 – anaphylaxis.
23. The first of these changes provided for individuals to claim for rhinitis or asthma on the basis of individual proof that they had been exposed to NRL during the course of their work; the agent was specified in prescription, rather than their occupation or the nature of their work, providing maximum flexibility as to circumstances.
24. The second decision reflected certain nuances of the Scheme's accident provisions as they related to claims for anaphylaxis. In the event of an anaphylactic episode that occurred in the *workplace*, it would be open to an employed earner to lay claim that an industrial accident had occurred and the claim would be assessed accordingly. PD B15, however, covered the worker who became sensitised to NRL in the workplace, but in whom the subsequent provocation of an anaphylactic response occurred *outside* work and who could not therefore claim that an industrial accident had occurred.

25. The new prescription was limited to healthcare workers on the grounds that "*there is clear evidence of increased risk of occupational sensitisation in these workers and on the balance of probabilities, it is reasonable to assume that anaphylaxis occurring outside of work due to latex (for healthcare workers) would probably be due to sensitisation occurring during employment*" (Cm 5997).
26. It should be noted that in restricting eligibility to the healthcare sector, less flexibility was granted decision-makers in respect of occupational sensitization resulting in anaphylaxis (paragraph 25) than in respect of occupational sensitization resulting in other major allergic manifestations (paragraph 23).
27. A *prima facie* case can be made now for bringing the provisions for anaphylaxis (PD B15) in line with those for occupational rhinitis (PD D4) and occupational asthma (PD D7); only if occupational anaphylaxis is unreported outwith the healthcare sector would the argument against recommending assessment on an individual proof basis carry weight.

NRL allergy in non-health care workers

28. Almost all of the epidemiology on NRL allergy has been conducted in populations of healthcare workers. There are, however, *bona fide* case reports describing the condition in other occupations, and a small number of cross-sectional surveys that indicate higher than expected rates of NRL allergy in several different workforces, including employees of a factory making surgical gloves (1), green house workers (2) and hairdressers (3).
29. More rarely, there have been reports of NRL allergy arising from occupational contact with non-glove latex products, such as in the manufacture of rubber bands (4), toy dolls (5) or elastic textiles (6).
30. Although NRL allergy can develop through the long-term use of internal medical devices (paragraph 17), it appears to be very unusual to acquire primary NRL allergy through exposure outside the workplace. Two allergy experts consulted by the Council confirmed this view.
31. This suggests that if a worker, in whatever occupation, frequently wears powdered latex gloves or is exposed otherwise to NRL and is identified as sensitised to NRL, then it is highly probable that the sensitisation developed through an occupational exposure; presumption that their disease is occupational would lie in their favour and

ensuing anaphylaxis should be regarded as occupational. At present, the accident provisions would cover all such individuals in the event of a provoking exposure in the workplace, and PD B15 should extend this coverage to all such individuals occupationally sensitised but incurring anaphylaxis from a provoking agent encountered outside work.

NRL allergy and presumption

32. The terms of prescription for PD B15 are currently worded as follows: 'Employment as a healthcare worker having contact with products made with natural rubber latex'.
33. The prescribed disease is one which enjoys the benefit of presumption under Regulation 4 of the Social Security (Industrial Injuries) (Prescribed Diseases) Regulations 1985. This provides that in the absence of special circumstances to the contrary a claimant with anaphylaxis and this work history should be presumed to have had their anaphylaxis because of their work. Presumption is normally accorded where research evidence supports such attribution on the balance of probabilities, which is the case for PD B15 in healthcare workers (paragraph 25). The evidence in paragraphs 28 and 29 suggests that the benefit of presumption should also extend to NRL anaphylaxis arising in a non-healthcare worker who has regularly worn powdered latex gloves, or been regularly exposed to latex products, in the course of their work.

Recommendations

34. The Council recommends therefore that PD B15 should be amended to provide benefit in respect of employment in any occupation in which there is regular contact with products made with natural rubber latex, with no change envisaged in respect of presumption under Regulation 4 of the Social Security (Industrial Injuries) (Prescribed Diseases) Regulations 1985. In this way, PD B15 – like PD D4 and PD D7 – can be assessed without restriction by occupational group.
35. Historically, and as manifest in the epidemiological literature, the highest risks of occupational NRL allergy were identified among healthcare workers. Consequent, wide-scale substitution of latex gloves by synthetic alternatives in healthcare (see paragraph 20) has resulted in a marked reduction of risk in these workers. The potential for NRL sensitisation remains, however, in other groups of workers and the

Council proposes that the terms of prescription be broadened to cover all occupations with regular contact with latex.

36. Since occupational NRL allergy seems overwhelmingly to arise from contact with powdered latex gloves, the Council also considered whether to replace "contact with products made with natural rubber latex" with "contact with powdered natural rubber latex gloves". On balance, however, the Council prefers the word 'product' to be retained, to cover instances such as those cited in paragraph 29 and to allow maximum flexibility in decision making.
37. The proposed new wording is as set out in the table below.

Suggested new terms of prescription for PD B15

PD	Disease	Any occupation involving
B15	Anaphylaxis	regular contact with products made with natural rubber latex

38. In 2003, the Council considered which aspect(s) of 'anaphylaxis' should be compensable and wrote as follow: *"Under the terms of the scheme, disablement must be present 91 days after the accident has occurred. Generally, anaphylaxis resolves or results in death within a few days. However, on occasion, anaphylaxis can result in long-term neurological sequelae due to a lack of oxygen to the brain during an attack. The Council recommends that such neurological disorders continue to be taken into account when assessing disablement. In addition, the Council recommends that anxiety, which may be caused by a life-threatening anaphylactic reaction should also be taken into account during assessments of disablement"* (Cm5997; paragraph 268). These arguments remain valid and should be retained.
39. The proposed amendments will ensure that individuals suffering anaphylaxis following sensitisation to NRL in work settings outwith the healthcare sector will be treated on a par with those sensitised in the healthcare setting. However, anaphylaxis from NRL is a rare event and the Scheme receives very few claims for

PD B15. The Council believes that the amendments would be very unlikely to result in a large number of new claims to the Scheme.

Equality

40. The Industrial Injuries Advisory Council seeks to promote equality and diversity as part of its values. The Council has resolved to seek to avoid unjustified discrimination on equality grounds, including age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, gender and sexual orientation. During the course of this review no matters related to diversity and equality were apparent.

Prevention

41. Anaphylaxis induced by exposure to NRL will be a consequence of an individual becoming sensitised previously. The risk of sensitisation to NRL, expressed for example as the incidence of rhinitis or occupational asthma, can be substantially reduced by effective controls on exposure. The Control of Substances Hazardous to Health Regulations 2002 (as amended) (COSHH) applies to work with products containing NRL. COSHH requires employers to undertake a suitable and sufficient assessment of the risks created by the work and to identify and take measures to prevent exposure as far as is reasonably practicable.
42. Most cases of NRL sensitisation in the workplace have been associated with the use of latex gloves and thus substitution with an alternative, including powder-free gloves, would help to prevent exposure and reduce the potential for sensitisation. If there is the potential for inhalation exposure, where substitution of NRL with a safer substitute or total enclosure is not reasonably practicable, exposure must be adequately controlled by the use of appropriate work processes, systems and engineering controls and measures including local exhaust ventilation systems to control exposure at source. Suitable respiratory protective equipment may be used in addition, where adequate control cannot otherwise be achieved.
43. Workers using NRL need to be informed of the risks and be provided with appropriate training. In addition, COSHH requires employers to arrange appropriate health surveillance where employees are exposed to a substance known to cause respiratory sensitisation and there is a reasonable likelihood of it occurring under the conditions of work.

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