INDUSTRIAL MEDICINE

AND

HYGIENE

Edited by

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CHAPTER 1

OCCUPATIONAL SKIN DISEASES

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LEGAL ASPECTS OF OCCUPATIONAL SKIN DISEASE

Workmen's Compensation Act

THE Workmen's Compensation Act of 1906 brought industrial diseases into line with accidents for purposes of compensation.

In an Order made in 1907 under Section 8 (6) of this Act, " eczematous ulceration of the skin produced by dust or caustic or corrosive liquids " was added to the Schedule of diseases—a short one then of only 6—for which compensation could be claimed by a workman. In 1908, 19 persons successfully maintained a claim for this cutaneous condition.

For such a claim, unless the employer accepted responsibility, the Certifying Surgeon, after examining the workman, declared that he was suffering from the Scheduled Disease, and was thereby disabled from earning full wages at the work at which he was employed. It was required that there should be proof, or presumption, that the disease was due to the nature of the employment in which the workman had been employed, at any time within the 12 months before the date of disablement. A claim could also be made if the Certifying Surgeon suspended a workman from employment under a Code of Regulations made under the Factories Acts, or if he died from a scheduled disease. Either the workman or the employer had a right of appeal (to the Medical Referee) against the Certifying Surgeon's decision. The precise date required of onset of the disease presented difficulty, but the principle of gradual development was established by Evans *v.* Dodd, 1912 (5B.W.C.C. 305), and eczema caused gradually by exposure of the skin to chemical fumes or splashes was accepted for compensation.

The term " dermatitis " made its first official appearance on 9 May, 1916, in an Order (Statutory Regulations and Orders No. 280) made under the Workmen's Compensation Act, 1906.

In 1923 the Workmen's Compensation (Dermatitis) Order marked a further advance by recognition, for purposes of compensation, of the disabling effects of " long-continued exposure " to dust or liquids. Before this, by an Order made in 1918, it was not possible for a workman to obtain compensation for dermatitis if he was deemed capable of doing work other than that in which the disease had been contracted.

Although the Dermatitis Order of 1923 left it to the County Court Judge to determine what was long-continued exposure, it would seem that it was open

to the parties to accept this either with or without reference of the point to the Medical Referee. The question of long-continued exposure was one of fact (Lane *v.* "Purewhite" Laundry, 1929, 22. B.W.C.C. 396). It is interesting to note that the legal view of dermatitis due to long-continued exposure to dust or liquids recognized the risk of contracting dermatitis again, if this was a consequence of having once contracted it, but not if it was due to personal idiosyncrasy (*Starkey* v. *Clayton*, 1925, 18 B.W.C.C. 346; *Rees* v. *Powell Duffryn Associated Collieries*, 1938, 1 A.E.R. 743 and 31 B.W.C.C. 28.)

Among the diseases or injuries scheduled for compensation in the third schedule to the Workmen's Compensation Act, 1925, were:

(1) poisoning by *Gonioma kamassi* (African boxwood);
(2) anthrax;
(3) glanders;
(4) dermatitis produced by dust or liquids;
(5) ulceration of the skin produced by dust or liquids;
(6) ulceration of the mucous membrane of the nose or mouth produced by dust.

On 5 July, 1948, the Workmen's Compensation Act, 1925, was superseded by the National Insurance (Industrial Injuries) Act, 1946, except for certain claims in respect of employment before this date. For claims made under the Act, *see* Table I.

TABLE I

CERTIFICATES OF DISABLEMENT FOR DERMATITIS PRODUCED BY DUST OR LIQUIDS*

(1) Year	(2) Certificates	(3) Voluntary notifications as percentage of (2)
1939	5,265	56
1940	5,154	77
1941	8,126	90
1942	10,588	83
1943	13,455	66
1944	13,893	58
1945	13,315	45
1946	13,506	45
1947	11,388	42
1948†	9,012	—

* Given by Examining Surgeons under the Workmen's Compensation Act, 1925.

† On 5 July, 1948, the Workmen's Compensation Act, 1925, was repealed except as regards certain cases, in which a right to compensation arises in respect of employment before the Appointed Day.

TABLE II

DISEASES PRESCRIBED FOR BENEFIT

Prescribed disease No.	Description of disease or injury	Nature of occupation
18	Poisoning by *Gonioma kamassi* (African boxwood)	The manipulation of *Gonioma kamassi* or any process in or incidental to the manufacture of articles therefrom
19	Anthrax	The handling of wool, hair, bristles, hides or skins or other animal products or residues, or contact with animals infected with anthrax
20	Glanders	Contact with equine animals or their carcases
23	(*a*) Ulceration of the corneal surface of the eye (*b*) Localized new growth of the skin, papillomatous or keratotic (*c*) Epitheliomatous cancer or ulceration of the skin, due in any case to tar, pitch, bitumen, mineral oil (including paraffin), soot or any compound, product or residue of any of these substances	The use or handling of, or exposure to, tar, pitch, bitumen, mineral oil (including paraffin), soot or any compound, product or residue of any of these substances
24	(*a*) Chrome ulceration	Any occupation involving the use or handling of chromic acid, chromate or bichromate of ammonium, potassium, sodium or zinc, or any preparation or solution containing any of these substances
	(*b*) Inflammation or ulceration of the skin or of the mucous membrane of the upper respiratory passages or mouth produced by dust, liquid or vapour (including the condition known as chlor-acne but excluding chrome ulceration)	Exposure to dust, liquid or vapour
25	Inflammation, ulceration or malignant disease of the skin or subcutaneous tissues or of the bones, or leukaemia, or anaemia of the aplastic type, due to x-rays, ionizing particles, radium or other radioactive substance; or inflammation of the skin due to other forms of radiant energy	Exposure to x-rays, ionizing particles, radium or other radioactive substance or other forms of radiant energy

National Insurance (Industrial Injuries) Act, 1946

Provisions of the Act

The National Insurance (Industrial Injuries) Act, 1946, applicable to all persons in insurable employment, with equal weekly contributions by employer and employee to the Industrial Injuries Fund, introduced a new outlook on the statutory aspects of accidents and of certain diseases arising out of and in the course of employment. A list of such diseases has been

prescribed for benefit, following for the most part the scheduled diseases of the Workmen's Compensation Act, 1925, but with some important alterations and additions. While " arising out of, or in the course of employment " has been retained, new phrases express the changed outlook—" injury benefit ", " disablement benefit " and even " death benefit "—replacing the term, " compensation "; furthermore, inability to earn full wages at the work at which the accident or disease was contracted is no longer a *sine qua non*. " Incapable of work "—that is, any work that the claimant can reasonably be expected to do—is now the qualifying phrase relating to injury benefit and disablement benefit is related to " loss of physical or mental faculty ".

As to causation, the claimant will generally have the presumption in his favour if he is suffering from the disease or injury and was at the material time employed in the occupation listed in connexion with the particular prescribed disease or injury.

Diseases prescribed for benefit

So far as this chapter is concerned, the prescribed diseases are as shown in Table II.

Claims under the Act

The procedure for a claimant to benefit under the National Insurance (Industrial Injuries) Act is first to communicate with the Local National Insurance Office, by means of Form Med. 1, obtained from his personal medical attendant. The case is then usually referred by the Ministry of Pensions and National Insurance to a medical practitioner for an opinion. These Examining Medical Practitioners are often, but not invariably, the Appointed Factory Doctors with statutory duties under the Factories Act. The Examining Medical Practitioner is provided by the Ministry of Pensions and National Insurance with a *Handbook on the Prescribed Diseases*, giving information on procedure and appeals, with guidance on many points including the "recrudescence question ". For claims made, *see* Tables III, IV and V.

Claims at common law

Common-law actions are said to be more common since the repeal of the Workmen's Compensation Act of 1925 by the National Insurance (Industrial Injuries) Act, 1946, the latter coming into force on the Appointed Day, 5 July, 1948.

The Workmen's Compensation Act (Section 29) set out the *alternative* remedies, independent of this Act, which the workman had against his employer; thus as alternatives he might seek a remedy under common law or under the Employers' Liability Act, 1880.

Under the new Act, however, an insured person suffering personal injury caused on or after the appointed day by accident (and this includes prescribed diseases and injuries) arising out of and in the course of his employment, being insurable employment, has a *right* to benefit (subject to the provisions

TABLE III

NATIONAL INSURANCE (INDUSTRIAL INJURIES) ACT, 1946*

Analysis by industry of successful claims for benefit during the period from 5 July, 1948, to 31 December, 1948

Prescribed disease	Total number of successful claims	Agriculture, forestry and fishing	Mining and Quarrying	Non-metalliferous mining products other than coal	Chemicals and allied trades	Metal manufacture	Engineering, shipbuilding and electrical goods	Vehicles	Metal goods not elsewhere specified	Precision instruments, jewellery, etc.	Textiles	Leather, leather goods and fur	Clothing	Food, drink and tobacco	Manufactures of wood and cork	Paper and printing	Other manufacturing industries	Building and contracting	Gas, electricity and water	Transport and communication	Distributive trades	Miscellaneous
24 (b) Inflammation or ulceration of the skin, etc. produced by dust, liquid or vapour	7,763	179	1,282	247	356	348	720	384	301	43	401	82	95	712	167	131	208	609	94	302	194	908
25. Inflammation, ulceration or malignant disease of the skin, etc., due to x-rays, etc.	17	—	2	—	—	2	4	—	1	—	—	—	—	—	—	—	—	—	—	1	2	5

* From the Second Report of the Ministry of National Insurance, Cmd. 8412.

TABLE IV

SPELLS OF CERTIFIED INCAPACITY IN 1949 AND 1950 ARISING FROM DEVELOPMENTS OF PRESCRIBED DISEASES OCCURRING IN 1949*

Prescribed disease†	Description	Number of spells‡
—	Total (including spells arising from recrudescence of diseases) – – – – – –	38,500
24 (b)	Inflammation or ulceration of the skin or of the mucous membrane of the upper respiratory passages or mouth produced by dust, liquid or vapour – – – – – –	18,900
31	Beat hand – – – – – – –	1,200
32	Beat knee – – – – – – –	11,000
33	Beat elbow – – – – – – –	1,800
34	Inflammation of the synovial lining of the wrist joint and tendon sheath – – – –	4,700
	Other – – – – – – – –	900

* From the Second Report of the Ministry of National Insurance, Cmd. 8412.
† Under the National Insurance (Industrial Injuries) Act, 1946.
‡ Provisional figures for Great Britain.

TABLE V

SPELLS OF CERTIFIED INCAPACITY ARISING FROM DEVELOPMENTS OF PRESCRIBED DISEASES OCCURRING IN 1950*

Prescribed disease	Description	Number of spells†
—	All causes – – – – – – –	43,000
24 (b)	Inflammation or ulceration of the skin or of the mucous membrane of the upper respiratory passages or mouth produced by dust, liquid or vapour – – – – – –	21,000
31–33	Subcutaneous cellulitis of the hand and subcutaneous cellulitis of acute bursitis at or about the knee or elbow – – – –	15,000
34	Inflammation of the synovial lining of the wrist joint and tendon sheath – – – –	5,000
	Residual – – – – – – –	1,000

* From the Third Report of the Ministry of National Insurance, para. 60, Cmd. 8635.
† Provisional figures for Great Britain.

of the Act) which is not lost by the exercise of his civic rights at common law. Moreover, the Law Reform (Personal Injuries) Act, 1948, which repealed the Employers' Liability Act, 1880, did two things; (1) it abolished the defence of common employment · " it shall not be a defence to an employer who is sued in respect of personal injuries caused by the negligence of a person employed by him that that person was at the time the injuries were caused in common employment with the person injured "; (2) it amended the law relating to the measure of damages for personal injury or death.

Of importance, perhaps, in connexion with the alleged greater frequency now of common law actions, in respect of personal injury from industrial disease or injury or sickness, is Section 2 (1) of this Act, which reads:

> " In an action for damages for personal injuries (including any such action arising out of a contract), there shall in assessing those damages be taken into account, against any loss of earnings or profits which has accrued or probably will accrue to the injured person from the injuries, one half of the value of any rights which have accrued or probably will accrue to him therefrom in respect of industrial injury benefit, industrial disablement benefit for the five years beginning with the time when the cause of action accrued."

The understanding of the principles on which claims at common law may be decided in connexion with industrial diseases requires considerable acumen and generally legal knowledge beyond the scope of the medical profession, members of which regrettably often acquit themselves poorly in the witness box.

In delivering judgment in the case of *Clifford* v. *Charles H. Challen & Son, Ltd.* (1951 1 A.E.R. 72, Court of Appeal, December 1950; T.L.R. 225–268, 9 February, 1951), L. J. Denning is reported to have said:

> " The standard which the law requires is that [employers] should take reasonable care for the safety of their workmen. To discharge that duty properly an employer must make allowances for the imperfections of human nature. When he asks his men to work with dangerous substances, he must provide proper appliances to safeguard them, he must set in force a proper system by which they use the appliances and take the necessary precautions, and he must do his best to see that they adhere to it. He must remember that men doing a routine task are often heedless of their own safety and may become careless about taking precautions. He must, therefore, by his foreman, do his best to keep them up to the mark and not tolerate any slackness. He cannot throw all the blame on them if he has not shown a good example himself."

L. J. Cohen is reported to have said:

> " Where an employer is making use of a dangerous process, it is not enough for him to have available somewhere in the factory the appliances necessary to minimize the danger. The system of working must be one in which the appliances are available at the place where they are needed, and the man in charge of the work should be responsible for seeing, so far as he can, that the workers make use of the appliances provided."

In this case, a workman, who was employed by radio and piano manufacturers and contracted dermatitis from synthetic glue, claimed damages

from them on the ground that his injury resulted from their having failed to supply a safe system of working.

> He went to the firm as a trainee in 1946 and for about 6 months was employed in the radio-cabinet shop, where a Government notice as to the dangers of such glue and as to precautions (probably Factory Form 366) was put up. Barrier cream was provided, women bringing it from the store for the men to use, and there were 2 buckets of water to wash with. After that he was employed in the piano-fitting shop, where the notice was not put up, there was no barrier cream and there was only 1 bucket of water. The cream was kept in the factory store. The workman and the other men in the piano-fitting shop could have obtained the cream from the store if they had wished, but in fact none of them used it, and the foreman, who said that he was not a great believer in it, made no serious attempt to induce them to do so. Containers were not provided for fetching the cream; if the workman did not have a small tin or jar of his own, he could get the cream from the store on a piece of grease-proof paper and take it back to the shop and there apply it.

The Court decided that damages were payable on the basis that there was not a safe system of working, but that, in view of the workman's contributory negligence in not using barrier cream, though he knew of the danger, the damages should be borne by the parties equally (in other words, the workman should only receive half).

L. J. Denning stressed the point that this was a known danger and that the notice was recognized both by the manufacturers of the glue and by outside employers as laying down proper precautions which ought to be taken. " It affords, therefore, a safe basis on which the common law can build, because the courts will certainly have regard to the failure to take those precautions."

In short, to be regarded as having taken reasonable care for the safety, health and welfare of his workmen, an industrial employer is expected to have discharged his legal obligations under the Factories Acts, 1937 and 1948; he ought also to have satisfied any requirements under Regulations or Orders made under the Factories Act, 1937; in addition he must have carried out the recommendations (whether written, in confirmation of verbal advice or in placard form) of the Factory Department of the Ministry of Labour and National Service. Further, the factory employer must, it seems, to defend successfully a common law action against him, administer a system for inducing the workman to use the appliances and to take the necessary precautions in the interests of his health, safety and welfare.

The Factories Act, 1937, lays down the duties in this respect of persons employed (Section 119 (1)):

> " No person employed in a factory or in any other place to which any provisions of this Act apply shall wilfully interfere with or misuse any means, appliance, convenience or other thing provided in pursuance of this Act for securing the health, safety or welfare of the persons employed in the factory or place, and where any means or appliance for securing health or safety is provided

for the use of any such person under this Act, he shall use the means or appliance."

In the event (*see* Section 130 (2) of the above Act) of a contravention by an employed person in respect of the duties of persons employed, that person shall be guilty of an offence, and the occupier (or owner, as the case may be) shall not be guilty of an offence in respect of that contravention, unless it is proved that he failed to take all reasonable steps to prevent contravention.

In the Patent Fuel Special Regulations (S.R.O. 1946, No. 258), made under Section 60 of the Factories Act, 1937, and largely designed to prevent the health risks arising from exposure to pitch, there is found the only statutory requirement (Reg. 17) to provide " sufficient supplies of a suitable barrier cream or similar protective substance for the skin "

Other statutory requirements

Other codes of regulations—for example, Chromium Plating Regulations, 1931 and Chemical Works Regulation, 1922—require the provision of " ointment ", as do the various Herring Curing Welfare Orders. Such " ointment " may be used prophylactically or therapeutically, according to circumstances.

An Official Cautionary Notice as to the prevention and cure of dermatitis is required to be prominently displayed in bakehouses (Bakehouses Welfare Order, 1927) and in biscuit factories (Biscuit Factories Welfare Order, 1927). Among other statutory notices for factory display (under certain codes of regulations) for the prevention of dermatitis are " Effects of Chrome on the Skin " (Factory Form 398) and " Danger, Hydrofluoric Acid " (Factory Form 2250).

In view of the emphasis in common law cases on the importance of the advice given on Government placards, anyone interested can consult a list of these " Official Forms (Form 101) for use in premises under the Factories Act, 1937 ", and they can obtain from H.M. Stationery Office copies of these publications. which, as well as placards, include numerous advisory memoranda and pamphlets.

NOTIFICATION OF OCCUPATIONAL DERMATITIS

In spite of the fact that dermatitis is not one of the diseases which, if contracted in a factory, are notifiable under Section 66 of the Factories Act, 1937, it may be appropriate to consider here some of the presumed reasons why dermatitis, although a condition prescribed for benefit under the National Insurance (Industrial Injuries) Act, 1946, is not a statutorily notifiable condition. It will be recalled, however, that, whereas there are 39 such prescribed diseases or injuries, there are at present only 14 notifiable industrial diseases.

On receipt of a notification of an industrial disease, certain steps are taken, the main objective of which is the prevention of further cases. As part of

these investigations, a report on the notified case is made after examination by the Appointed Factory Doctor for the area. These reports take time and are, of course, paid for out of public funds. The incidence of dermatitis being considerable, the cost of such reports if dermatitis was notifiable is a serious consideration, especially when the inclusion of wrong diagnoses by the notifying practitioner is appreciated, as well as the fact that there is, in the circumstances laid down in the Factories Act, 1937 (Section 66 (3)), a legal obligation on the employer to notify both the inspector for the district and the Examining Surgeon (now called the Appointed Factory Doctor). Perhaps more cogent than financial considerations is the fact that every notification of an industrial disease is followed up at the place of work by the Factory Inspectorate, and if dermatitis was included among the statutory notifications an already overloaded department would have, as a duty, to make every year many thousands of additional investigations.

TABLE VI

CASES OF DERMATITIS (1939–51) IN INDUSTRY VOLUNTARILY NOTIFIED*

Year	Cases	Year	Cases
1939	2,953	1946	6,166
1940	4,744	1947	4,884
1941	7,291	1948	4,718
1942	8,802	1949	3,609
1943	8,926	1950	3,571
1944	8,180	1951	3,281
1945	5,996	1952	3,122

* Notified to the Factory Department of the Ministry of Labour and National Service.

Other obstacles to notification

From the point of view of the medical practitioner there is the almost unanswerable question as to when, varying from an erythema to a weeping eczema, an inflammatory condition of the skin becomes notifiable. Disability or loss of function might be the criterion for notification, but since the primary objective of notification is prevention, the matter is obviously one of difficulty.

Suggestions have been made that medical practitioners, when asked to give an opinion to the Ministry of National Insurance on a claim for benefit on account of the by now well-known prescribed disease No. 24 (b)—in brief " dermatitis "—should forward to the Factory Department the results of their examinations.

To be of value in prevention, this information from Examining Medical Practitioners would need to be received by the Factory Department " forthwith "; furthermore, the information is based on the examiner's opinion, and subsequent action or actions may have to be taken before a claim for benefit is finally accepted or refused.

Legal considerations may make this procedure impracticable, but, in spite of numerous and weighty difficulties, a liaison has been established between

the two Ministries concerned, for the exchange of information relating to certain prescribed diseases including dermatitis.

Voluntary notification by employers

Dermatitis in industry has been for many years notifiable on a voluntary basis to the Factory Department and, with the co-operation of industry, much valuable information has been acquired by this method, which, although it cannot, as might statutory notification, give a complete picture of to what extent, and in what industries, dermatitis has occurred, does nevertheless give, by sampling, a practical indication of these points (*see* Table VI). Willing though the employer may be to notify voluntarily to the Factory Department the occurrence of dermatitis in his factory, he maintains, and with some justification, that, under the present procedure for claiming benefit under the National Insurance (Industrial Injuries) Act, he is ignorant of the cause of absence of his employees.

INVESTIGATION OF OCCUPATIONAL SKIN HAZARDS

Such investigations may be made either (1) to assess the hazards of skin disease in a particular occupation, or (2) to identify the cause, or causes, of pathological skin conditions occurring among the workers.

FIG. 1.—Occupational dermatitis in a nickel plater

The objective is to prevent occupational dermatoses, and, since so much depends on the knowledge, technical as well as dermatological, of the investigator, the following suggestions as to the *modus operandi* for such investigations can only include an elementary outline of procedure.

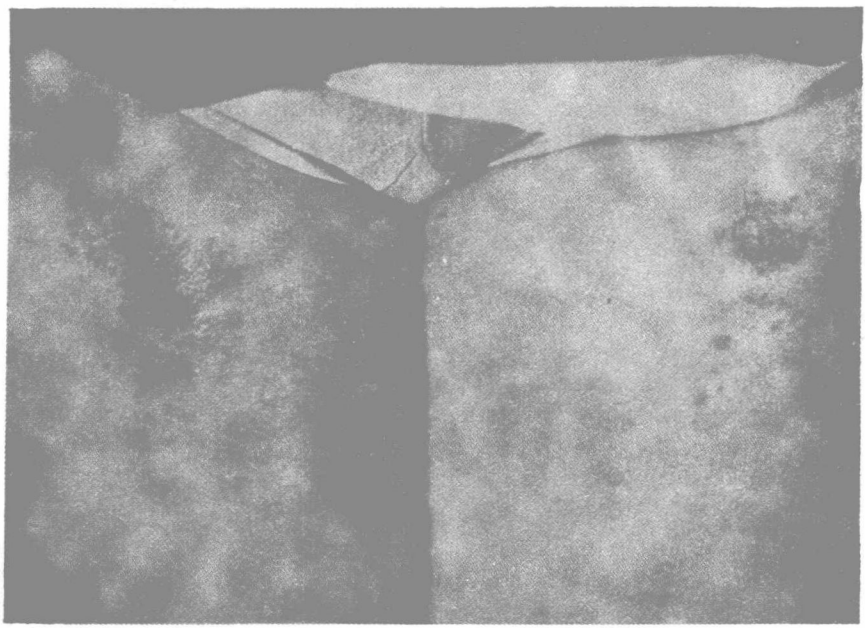

FIG. 2.—Suspender dermatitis caused by sensitivity to the metal plating on suspender clips. Often in these cases the patient has a papular rash on the arms, secondary to the main eruption.

Examination of workers affected

Investigations should take place at the factory, and will include examinations of persons known to be affected, if they are available, as well as a review of workers performing the same and possibly different processes. If those believed to have dermatitis are " off work " it is a help to see them prior to the investigations at the factory. Such points will be noted as the following: (1) how long each worker was employed before the present attack; (2) what, if any, were the special immediately antecedent circumstances; (3) the previous dermatological history, especially as to occupational dermatitis; (4) the type of skin, home habits, hobbies and duties of the affected worker, and (5) the presence or history of cutaneous infections. Exactly where the skin eruption started should be elicited, and it is always worth while to ask for the precise work to be described and to inquire to what cause the condition is attributed (*see* Figs. 1 and 2).

After taking each case-history, the following points should be noted: (1) site, (2) distribution and type of skin reaction, and (3) any changes in