



THE INDUSTRIAL INJURIES ADVISORY COUNCIL

**STRESS AT WORK AS
A PRESCRIBED DISEASE
AND POST-TRAUMATIC
STRESS DISORDER**

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POSITION PAPER 13

BACKGROUND

- 1.** In recent times there has been increasing concern about the risk of illness following stressful experiences at work. A survey by the Health and Safety Executive (HSE), for example, has estimated that nationally some half-million individuals believe they have been exposed to occupational stressors at a level that caused them to become ill.

- 2.** In these circumstances the Industrial Injuries Advisory Council (IIAC) has undertaken an investigation to review whether, and under what conditions, it might be possible to extend the schedule of prescription under the Social Security Contributions and Benefits Act 1992 to include adverse health outcomes ascribed to stressful exposures at work. While this paper focuses primarily on mental health problems related to stressful exposures, but consideration is also given to physical illnesses that have been linked with “stress” at work.

- 3.** Review of the outcome of cases referred to the Social Security Commissioners by Council members identified Post-Traumatic Stress Disorder (PTSD) as one area of particular difficulty. The review focussed on PTSD in relation to the Accident Provisions: of particular importance was clarification of the nature of stressful events capable of causing PTSD.

- 4.** The term 'stress' has come into popular usage, but is used in different senses by different people. For example, the HSE definition of stress is 'the adverse reaction people have to excessive pressure or other types of demand placed on them'. In particular, stress is used both to denote unpleasant circumstances or stimuli that may lead to stress-related illnesses and to the illnesses themselves. To avoid confusion, a clear distinction is drawn in this position paper between stressful exposures or circumstances (stressors) and stress-related outcomes and illnesses.

- 5.** The issues are considered in two sections – 'Section 1: Stress-related illness as a prescribed disease' and 'Section 2: The Accident Provisions and Post-Traumatic Stress Disorder'. In addition, a commentary is provided on prevention (Section 3) and the Council's conclusions and recommendations (Section 4).

SECTION 1: STRESS-RELATED ILLNESS AS A PRESCRIBED DISEASE

The legal requirements of prescription

6. The Social Security Contributions and Benefits Act 1992 enables the Secretary of State to prescribe a disease when he is satisfied that it:
 - 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) it 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.
7. In other words, a disease may only be prescribed if it is a recognised risk of particular work, and its link with occupational exposure can be established or reasonably presumed in individual cases.
8. In practical terms, for a disease to be prescribed, there must exist a valid method of diagnosis, capable of being applied in a high-volume, low-cost, no-fault compensation system; and the attribution to occupation must be capable of being established with reasonable certainty in the individual case within these same constraints.
9. Against this background the Council received verbal and written evidence from experts in the fields of psychiatry and psychology, and its Research Working Group conducted a review of the scientific literature concerning work stressors and mental ill-health. Opinions were solicited by invitation, but no general request for evidence was formally advertised. Reports were also received from the Department for Work and Pensions Corporate Medical Group, and recent case law and judgements relating to PTSD were also considered. A list of consultees is provided in Appendix 1. Some background information on common mental illnesses and their relation to stressors is provided in Appendix 2.

Definition of the health outcome

10. To recommend the prescription of a disease, its diagnosis has to be underpinned by a clear case definition. Also, in practice, there should be a reasonable degree of agreement between clinicians that the disease is present in the individual case; and, to assess the appropriate level of compensation, experts should be able to agree on the severity of illness and its clinical impact.
11. A key issue is the definition of stress-related mental illness for which the evidence is presented; and the ability to readily verify that illness in a claimant. For most diseases that are currently prescribed the diagnosis is supported in the individual case by direct clinical observations and tests (e.g. physical signs on clinical examination, histology, radiographs, tests of lung function) and is readily verifiable. Prescription on the basis of symptoms alone is more difficult, but exceptionally it has proved possible for a few diseases in which observable signs and tests are of limited help (e.g. for vibration-induced white finger).

12. But where the diagnosis is no more specific than 'stress' and this diagnosis is reliant on self-reported symptoms or categorisation on the basis of research-based survey instruments such as Goldberg's Stress and Anxiety scale, independent verification would be difficult and would be resource intensive.
13. In addition, it is well accepted that most people experience symptoms of heightened anxiety or arousal (e.g. perspire, feel anxious, experience difficulty in concentrating, have a faster pulse rate, find it less to easy sleep) in relation to stressful or challenging situations. Experience of such feelings does not necessarily lead to any harmful or long-lasting ill-effects, and cannot therefore be described as a disease, although the term 'stress' is sometimes used to describe the sensation. As mentioned previously, the HSE has suggested that stress is the adverse reaction people have to excessive pressure, and is not a disease, although having the potential to lead to ill-health.
14. Specific mental illnesses, such as anxiety or depression, may be more readily verifiable than non-specific stress, especially when there are directly observable associated signs of mental illness, a well-recognised pattern of disease (of the kind described in Appendix 2), or independent corroboration of impaired functioning; but agreement between experts tends to be less good than when objective tests exist to confirm the diagnosis and assess the severity of disease.
15. Experience to date in legal and statutory assessments underscores this point. Lack of medical consensus on diagnosis and management has made it difficult to assess entitlement for War Pensions and Industrial Injuries Disablement Benefit (IIDB) (following an accident) when "stress" is alleged as the outcome. Cases of alleged illness from PTSD that have appeared before Commissioners have had to be considered on an individual basis (with varying outcomes) because of the challenge posed in assessing mental illness in individual circumstances, and so they have had little value in establishing clear precedents.
16. These considerations suggest that fulfilling the first requirement of prescription – identifying the illness and assessing its impact - would be more challenging in the case of a mental health disorder than for some other conditions that are currently prescribed, although not impossible.

Identification of the exposure

17. Stressors are various in kind, and include non-occupational as well as occupational factors. In the former category, for example, are domestic problems and illness in close family members; while examples of the latter include high or low pressure or volume of work, exacting work tasks and bullying at work.
18. Several schemes have been proposed to classify work-related stressors (see Appendix 2). At different times and in various circumstances, work can prove stressful if it is too great or too little in volume, too monotonous or too complicated, too slow or too fast; ambiguity of job role, insecurity of employment and poor relationship with boss or colleagues can similarly be stressful.
19. No agreement exists at present on the means to confirm that important stressors have been present, or define their time course and the extent of exposure. For example, a recent comprehensive review, undertaken for the HSE by the Institute for Employment Studies, highlighted that despite many thousands of research papers on occupational stress, there was only very limited information on the reliability and validity of the measures of psychosocial hazard employed.

The attribution of the illness

20. For purposes of prescription a link also has to be made in the individual case between diagnosis and occupational exposure. In general the Council adopts one of two approaches to attribution, as explained in earlier reports:

- Evidence is first sought of distinctive clinical features in the individual that might point strongly to work as the cause (e.g. a challenge test with a specific allergenic agent from the workplace). This is the approach that was recommended by IIAC when occupational dermatitis and asthma were incorporated into the scheme.
- But where clinical evidence is not sufficient, epidemiological evidence is sought that would allow attribution on the balance of probabilities (with at least a doubling of risk in defined occupational groups). This has proved possible in situations where sound research has indicated higher risks of a given outcome in workers identifiable by their shared occupational exposure (e.g. chronic bronchitis and emphysema in coal miners working underground for more than 20 years).

21. Both approaches were explored in this review, but several obstacles to fulfilling the requirement became apparent. The main themes that emerged are set out in the following box.

According to the written and oral evidence received, stress-related mental illnesses:

- are difficult to define ("stress" is a subjective term, although some specific mental illnesses are capable of clear definition)
- are difficult to diagnose (because reliance is placed mainly on self-reported symptoms)
- are difficult to grade in terms of severity
- are common in the general population
- are multi-factorial (arising from domestic and societal as well as occupational stressors and often a combination of these)
- arise from risk factors which are subjectively reported, and influenced by personal individual perceptions
- arise from risk factors which are often subtle, hard to characterise, ill-defined in consensual terms, and difficult to measure and compare across groups
- are reported with a frequency that is heavily affected by cultural, societal and personal factors

22. Some difficulties appear to be more telling than others. The fact that an illness is common in the general population, and has non-occupational as well as occupational causes, complicates the issue of attribution but it does not preclude prescription. The case of chronic bronchitis and emphysema in coalminers, many of whom have smoked, demonstrates that attribution can still be presumed on the balance of probabilities, provided that sound epidemiological and measurement conditions are satisfied. This consideration indicates the need to seek an epidemiological, rather than a clinical approach to attribution.

Evidence based on clinical features

23. Of greater importance is the difficulty that the exposures would be complex and self-reported. In general, no simple inquiry in individual cases would enable the nature and intensity of occupational stressors to be independently confirmed, or their significance relative to other life events to be assessed in the individual.

24. The ability to verify the existence of a stressful work environment would be a necessary element of assessing cases of stress-related mental illnesses were they to be prescribed. Independent verification is important because self-reports of exposure would occur after the event, and so could be affected by problems of recall interpretation. For example, people who fall ill tend to seek a rational explanation for their condition, and may mistakenly ascribe symptoms to particular circumstances or certain events.

25. Importantly, at present no robust methodology exists to confirm independently that important stressors have been present and to measure their intensity.

26. In any case, verification of these 'exposures' in a given claim, including an assessment of their influence on the development of a case, weighed against other non-occupational factors, could not be achieved by simple inquiry given the current state of knowledge and would be too complex a process to be of value to the IIDB scheme. The clinical approach to evaluating attribution is therefore problematic.

27. The situation in civil compensation is different. Detailed judicial inquiry into the circumstances of exposure has enabled the courts to ascribe an illness to stressors in an individual case on the balance of probabilities (the civil case). However, individual proof is a resource-intensive process of verification which would not be open to a benefits scheme decision maker.

Epidemiological evidence

28. The alternative in this situation is normally to seek epidemiological evidence indicating at least a doubling of risk by occupation. IIAC's Research Working Group therefore reviewed the scientific literature and asked experts about mental health risks by occupation.

29. The relationship between work stressors and mental illness has been much researched. However, the Research Working Group identified no robust body of epidemiological evidence that satisfactorily demonstrated a doubling of risk in relation to specific occupations, such that it would be possible to say on the balance of probabilities that an individual case of a particular illness in a given occupation was due to their work.

30. Future evidence of doubling of risk would be most useful if presented in relation to a defined disease, and a specific occupation or occupations, as the verification of relevant exposure would be more straightforward for individual claimants.

31. However, some problems exist in principle in applying the epidemiological approach to work-related mental health illness. The assumption underlying the doubling of risk approach is that the association detected between exposure and illness indicates a causal relationship and is not explained simply by bias (systematic errors in the information obtained) or confounding (co-existing explanatory factors). However, false associations may easily arise in epidemiological research. For example, risk estimates by occupation may be confounded by factors that cluster in occupations but which are not in themselves occupational. In the case of stress, subjects with certain types of personality, psychopathology, or vulnerability traits may migrate into some kinds of job rather than others; and reported concern about mental health may differ systematically between occupations that differ on average in their perceptions, health beliefs, expectations, or cultural attitudes. These problems are not unique to mental ill-health, but they do represent a greater source of difficulty than for some other categories of illness.

32. Future research will need to allay these concerns if the evidence base on attribution is to be developed sufficiently to allow prescription for mental illness. In addition, consensual definitions will be required to describe and measure important occupational stressors (including such difficult and contentious issues as bad management practice); and simple guidelines, informed by research, will need to be developed to facilitate third party verification of relevant occupational exposures.
33. The HSE is currently developing ways to assess work-related stressors, including management practices, while the European Commission has proposed a Recommendation that Member States should “promote research in the field of ailments linked to occupational activity, in particular ‘disorders of a psychosocial nature’”. In due course such initiatives may provide tools on which the Council can frame future recommendations.
34. If robust evidence does emerge of a doubling of risk in a specific occupation, the application of such information to the high volume IIDB scheme will require further careful consideration.
35. At present, however, it is not possible to identify particular occupations where the risks are so great, on the balance of probabilities, that the illness can be presumed to be caused by occupational stressors. The Council has therefore considered the issue of attribution carefully, and agrees with the experts’ view that there are substantial difficulties, especially within the context of the IIDB scheme.

Physical illnesses ascribed to occupational stressors

36. Physical illnesses have been linked with occupational stressors in some research investigations. In particular, the Research Working Group received evidence on a survey of the British Civil Service (the Whitehall study), in which a well-quantified gradient of increasing risk for coronary heart disease was found in workers with decreasing job status, pay, and control over their work. It has been argued (because the divisions of responsibility and pay grade were small in step) that this gradient is unlikely to be explained by deprivation or adverse personal behaviours, and more probably reflects the impact of psychosocial stressors in the work environment.
37. There have been contrary observations – including a study in which the association with perceived stress existed for self-reported symptoms, but not for objective outcomes of heart disease such as mortality - perhaps questioning a causal association between psychosocial factors and physical ill-health.
38. However, even if the argument advanced in the Whitehall Study were to be accepted, many of the foregoing difficulties remain in prescribing for stress-related coronary heart disease: the outcome would be capable of closer definition than mental ill-health but the exposures would be equally hard to assess. Similar considerations are likely to apply to other illnesses in which exacerbations are sometimes attributed to stressful circumstances, such as asthma and bowel upset.

International comparisons and the European Community

39. No country has so far scheduled a mental disorder as an occupational disease. However, in the USA, details of Workers Compensation are decided at State level, and for claims related to occupational stressors the practice varies considerably. In States that recognise such disorders the number of claims appears to be in decline from a recent peak.

40. Some European Member States provide a ‘mixed system’ in which Regulations and administrative provisions permit a right to compensation where adequate proof is provided by a worker of contracting an occupational illness that does not appear on the European Schedule of Occupational Diseases. The Schedule does not include any mental health condition, and ‘stress’ is not defined as an occupational disease, but the system allows individual cases to be considered on their merits. In the longer term, individual proof through a consistent process may replace a defined list in other European countries. There is no information on the handling of mental health claims within mixed systems, but preliminary French experience suggests that the proportion of cases awarded benefit is very low. The systems currently in place are complex, and differ markedly in detail from one another and from the IIDB scheme, so that harmonisation will be difficult.

SECTION 2: THE ACCIDENT PROVISIONS AND POST-TRAUMATIC STRESS DISORDER

- 41.** It is clear that there are difficulties in recommending work-related stress to be added to the list of prescribed diseases. However, in the current IIDB scheme, certain cases of work-related stress can be compensated via the Accident Provisions, where a defined accident has led to mental illness. The Council has reviewed this issue, and has focused on providing guidance on PTSD and the Accident Provisions.
- 42.** The condition of PTSD is a recognised psychiatric disorder, defined in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Health Disorders (DSM-IV, 1994) and the World Health Organisation's International Classification of Diseases (ICD-10), in which an essential component of diagnosis and causation is relation to a serious antecedent accident.
- 43.** Cases of PTSD cause particular problems because of the difficulties in deciding what constitutes an accident. In the case of physical accidents the situation is usually clear because there is an event that can be accepted as "untoward" e.g. falling off a ladder. But the accidental circumstances which have been held to lead to stress-related illness have proved far more difficult to characterise. Decisions in this area have been so closely tied to the particular facts involved that it is difficult to define a clear set of over-riding principles.
- 44.** Claims from the emergency services are particularly difficult to deal with because the nature of the work undertaken seems intrinsically 'stressful' to those not involved in the work.
- 45.** The House of Lords has said that being in a stressful occupation does not of itself mean that a claim should succeed. The Council recognises that individuals may perceive themselves to be under stress at work or find certain workplace circumstances unpleasant and upsetting (for example, working unscheduled hours and missing breaks, or being shouted at by a colleague), but the criteria for PTSD are more exacting than this. By way of illustration, a fireman who is unable to escape a burning building, or a person who is unable to save the life of another, may experience an event of the kind sufficient to cause PTSD.
- 46.** The Council wishes to provide guidance and clarify its position about the diagnostic criteria for PTSD. The stressor must be an highly traumatic, single event that is, or could readily be perceived to be, life-threatening or extremely dangerous to the claimant or others - i.e. it should cause or threaten death or serious injury to the sufferer or others present at the time. It should be quite outside the realms of normal human experience and sufficient to cause severe distress in almost anyone, not merely unpleasant or threatening to livelihood or lifestyle.
- 47.** Exposure to such a major stressor does not automatically result in PTSD in all individuals. Generally, only 15% of those exposed to a severe, life-threatening situation subsequently develop PTSD. Predisposing factors include (i) a previous history of psychiatric disorder; (ii) gender – the disorder is more common in women than men; (iii) prolonged childhood separation from parents; (iv) a family history of mental illness; and (v) age – PTSD is more common in the children and the elderly. PTSD is characterised by high levels of co-morbidity; up to 90% of some series have other mental health problems such as manic-depressive disorder, anxiety disorder, alcoholism or substance abuse.
- 48.** DSM IV and ICD-10 set out the important diagnostic features of PTSD. The person's response to the event includes initial intense fear and helplessness or horror, leading to avoidance of circumstances resembling or associated with the event. Characteristics of PTSD include intrusive and distressing memories of the event causing it to be 'relived' ('flashbacks'), and symptoms of persisting psychological distress and increased arousal. There must be accompanying clinically significant distress and impaired social or occupational functioning.
- 49.** Symptoms normally arise within 6 months of the stressful event. There are few long-term studies of prognosis in PTSD but a range of outcomes have been described. The average duration is no more than two years following onset, but in 1% of cases symptoms can persist for many years.
- 50.** The expert psychiatrists consulted during this review agreed that exposure to a life-threatening event was one of the key diagnostic criteria for acute stress reaction and PTSD, and that claims of PTSD from minor events were outwith the diagnosis and should not be substantiated.

SECTION 3: PREVENTION OF WORK-RELATED PSYCHOLOGICAL ILL-HEALTH

51. Stress-related ill health is a leading source of work-related sickness absence in the UK. The risk from exposure to occupational stressors can be controlled effectively through good management practice and the introduction of effective interventions.
52. Employers have a legal responsibility to undertake a risk assessment to reduce the risk of employees being injured or made ill by their work, and further to apply the principles of prevention (Management of Health and Safety At Work Regulations 1999), including consultation with workers and their representatives.
53. There are a variety of interventions which may be of use in reducing exposure to stressors within an organisation and promoting the positive psychological benefits of work. The individual effectiveness of these interventions depends on the nature of the business and stressors within an organisation. However, the implementation of effective management policies in this area, with optimisation of organisational structure, has the potential to reduce exposure to stressors and promote psychological well-being, thereby reducing the incidence of work-related mental ill-health and working days lost.
54. HSE has published guidance: Tackling Work-related Stress: A Managers' Guide to Improving Employee Health and Well-being (HSG218) and also offers practical information via its website: www.hse.gov.uk/stress.
55. The Council would encourage timely intervention, support, and rehabilitation for cases of PTSD and other psychological injuries, where appropriate.

SECTION 4: CONCLUSIONS AND RECOMMENDATIONS

56. For the reasons set out in this paper, IAC is not able at present to identify circumstances in which it recommends extending the schedule of prescription to include adverse health outcomes ascribed to stress at work. However, it recognises fully the importance of mental health problems as a source of morbidity nationally, and will continue to keep the topic under review.
57. A person may claim benefit, under the Accident Provisions, for disablement arising from PTSD. For PTSD to be diagnosed as the pathological change arising from the accident, it is the view of IAC, based on evidence received, that the relevant incident should be a traumatic, single event that is, or could be reasonably perceived to be, severely life-threatening or with the potential to cause serious injury to the individual or others present at the time. It should be an event outside the realms of normal human experience. PTSD should only be diagnosed for the purposes of IIDB when it results from an incident of this nature.

APPENDIX 1: REVIEW CONSULTEES

Professor T. Cox	Professor of Organisational Psychology, Nottingham
Dr M. Lipsedge	Consultant Psychiatrist, Guy's Hospital, London
Professor Sir M. Marmot	Professor of Epidemiology and Public Health, University College, London
Dr L. Measey	Consultant Psychiatrist, Coventry Healthcare NHS Trust Mental Health Unit, Coventry
Professor S. Wessely	Institute of Psychiatry, King's College, London

APPENDIX 2: STRESS-RELATED MENTAL ILLNESSES

58. In preparing this report, the Research Working Group of IIAC reviewed several general textbooks and commentaries in the field, including papers submitted by the Corporate Medical Group; consulted with invited experts (Appendix 1); and analysed research papers from the Medline and Embase electronic databases for the past ten years.

59. Although detailed commentary is beyond the scope of this position paper, some further background on stress-related mental illness and the nature of stressors is provided in this section for information.

Stress-related mental illness

60. According to the HSE, 'stress' is not a mental illness but 'the natural reaction people have to excessive pressures or other types of demand placed on them. While not an illness, it may lead to mental and physical ill health if it is prolonged or intense.'

61. The word "stress" has been used widely and popularly to describe a health outcome, but it is ambiguous in terms of the disorders covered and fails to distinguish conditions that differ markedly in their clinical importance (severity) and certainty of diagnosis. In particular, it does not distinguish between the natural feelings that accompany daily challenges from those that denote severe psychological distress or definite mental illness. In terms of prevention it may be important to focus on the antecedents of illness, but in compensation the focus has to be on the clinically important end of this spectrum.

62. In this context, the mental health problems that have been related to occupational and non-occupational stressors can take various forms - some being well-described in clinical terms, with fair agreement among psychiatrists about the criteria required to make a diagnosis, and others less so.

63. Depression, generalised anxiety disorder and obsessive-compulsive disorder are examples of clinical illnesses in the former category - which to varying extent in individual cases may be aggravated or precipitated by stressors, and which are defined, for example, in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Health Disorders (DSM-IV, 1994) and the World Health Organisation's International Classification of Diseases (ICD-10).

64. The term "stress" is not represented by a DSM or ICD code, but DSM-IV includes the category of "reaction to stress and adjustment disorders", ICD-10 separately recognises "acute stress reaction" and "adjustment disorder", and both schemes provide a definition for the condition of "post-traumatic stress disorder" (which arises in a minority of people exposed to exceptionally traumatic events).

65. "Burnout" is also recognised by psychiatrists, although it is not classified as a formal psychiatric disorder in its own right (being covered in the ICD-10 coding scheme by Z73-'problems related to life-management difficulty'), and its defining features are less clear-cut.

66. Existence of these diagnostic labels, although helpful clinically, does not detract from the difficulties of verification and attribution for IIDB purposes referred to in the body of this report.

Relation to stressors

- 67.** Psychiatric illnesses, such as depression and obsessive-compulsive disorder, can arise in the absence of obvious and well-defined stressors. Other mental health problems, such as generalised anxiety disorder, may be associated with stressors that do not cause illness in most people and may represent a pathological response to such exposures.
- 68.** Quite often, however, the individual will particularly relate development of illness to the presence of noteworthy stressors in their life. These may be personal, social, or occupational – and may be as diverse as physical illness, bereavement, divorce, debt, unemployment, or bullying at work (various schemes of classifying stressors have been suggested – e.g. Khan 1974; Cooper and Payne 1998). Often a combination of factors can be uncovered by detailed inquiry. However, similar events may occur in the lives of individuals without mental illness, and the extent to which factors are causal rather than coincidental, or a manifestation of impaired coping, can sometimes be hard to judge. The response of an individual to a particular stressor is also determined by their susceptibility, including such factors as their individual constitution (personality and locus of control), lifestyle and work, coping mechanisms, emotional stability, previous experiences, expectations, and self confidence. (It should be noted that the argument against prescription is not based on personal susceptibility, but on other factors, as set out in the main section of the report).
- 69.** Occupational stressors that have been most closely studied include: control over the nature, conduct, and timetabling of work; decision latitude; the demands of work (e.g. difficulty, intensity, monotony); and social support at work (e.g. from colleagues and supervisors). Other factors often considered important include role ambiguity and role conflict (lack of clarity of what is expected from the worker), job insecurity, and issues of work organisation, culture and management systems. Workers who perceive their jobs to have a combination of adverse factors (e.g. to be high in demand with little control and support), more commonly report stress-related symptoms in standardised questionnaires. However, the evidence to date relates mainly to symptoms, rather than to substantial psychiatric illness.

