ECONOMIC AND SOCIAL
CONSULTATIVE ASSEMBLY

OCCUPATIONAL MEDICINE

OCCUPATIONAL CANCER

2 OPINIONS

EUROPEAN COMMUNITIES

ECONOMIC AND SOCIAL COMMITTEE

Brussels 1985

The Economic and Social Committee of the European Communities has decided to publish two Opinions and Reports on the protection of workers' health in a single booklet.

The Opinion on occupational medicine (Rapporteur : Mr Bernard MOURGUES - France - Workers' Group), together with a Report, was adopted by the Economic and Social Committee, under the chairmanship of Mr François CEYRAC, at its 219th Plenary Session on 27 September 1984 by 75 votes to 8, with 2 abstentions.

The Opinion on occupational cancer (Rapporteur : Mr Thomas ETTY - Netherlands - Workers' Group), together with a Report, was unanimously adopted by the Committee, under the chairmanship of Mr Gerd MUHR, at its 227th Plenary Session on 29 May 1985.

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O P I N I O N
of the
Economic and Social Committee
on
OCCUPATIONAL MEDICINE

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1. Introduction

This own-initiative Opinion on occupational medicine reflects the Committee's permanent concern to work for better health protection and safety for workers at the workplace.

This concern was also recently voiced by the Committee in its Opinion on the Second Action Programme of the European Communities on Safety and Health at Work[1].

Industrial accidents and work-related diseases are a scourge both in terms of their frequency and their seriousness. Some risks have undoubtedly been limited or eliminated as a result of technical progress and newly acquired knowledge, but the introduction of new products and processes occasionally gives rise to new hazards and new ailments.

Whatever the technical progress made, it is still essential in the interests of both workers and the population as a whole continually to work for improvements in working conditions and methods of production. Preventive action to obviate risks and health hazards in undertakings also plays a part in improving the protection of the environment as a whole.

The whole of society has to bear the burden of industrial accidents and work-related diseases. The workers concerned suffer physically, psychologically and financially; undertakings have to bear the cost of halts in production, repair work and the absence and replacement of sick and injured workers whilst also having to pay compensation; and society as a whole has to contribute to compensation schemes. Industrial accidents and work-related diseases represent a waste of human and material resources that needs to be combated.

The Committee has on many occasions in the past supported Community initiatives to improve knowledge about health risks, provide workers with better protection against certain harmful agents, and develop preventive action and measures. The Committee likewise recognizes that occupational medicine has for many years been a major preoccupation of international organizations such as the Council of Europe (Committee of Ministers Resolution (72) 5 of 18 February 1982 on the harmonization of measures to protect the health of workers in places of employment), the International Labour Organization (ILO) and the European Community itself (EEC Commission Recommendation of 20 July 1962 on occupational medicine within the enterprise (OJ of 31.8.62, p. 2181/62)).

The Committee also considers that in undertakings where it has been introduced, occupational medicine has made a major contribution towards improving health protection and safety. This essential function of occupational medicine is recognized to a greater or lesser extent in the legislation of most countries of the European Community.

2. Need for Community Action in the Field of Occupational Medicine

Given the importance of the role played by occupational medicine in improving health protection and safety at work, it is essential to ensure that all workers in all private and public-sector industries (including agriculture) are covered by occupational health services regardless of the size of the undertaking in which they work. Coverage for all workers is in the general interest. Hence the eagerness of the Committee to see the adoption of a Community Directive on occupational medicine. Such an instrument would secure occupational health coverage of workers on a general scale and would at the same time be consistent with action already taken by the Community in the field. A Community Directive would have to lay down various principles governing the role and organization of occupational medicine and would have to take due account of the tasks that could fall to the public authorities.

3. Definition of Occupational Medicine

The Committee subscribes to the following definition of occupational medicine:

(1) OJ No. C 176 of 4 July 1983.

Occupational medicine deals with the effects of work on health and with the effects of disease on capacity for work. Its function is to prevent the impairment of workers' health that could be caused by working conditions (this includes accident prevention) and to guarantee individual workers jobs in keeping with their physiological and psychological aptitudes.
(Definition drawn up by the Advisory Committee on Medical Training attached to the Commission of the European Communities).

4. Role of Occupational Medicine

The Committee considers that the primary aim of occupational health services is to contribute to the prevention of work-related diseases and accidents at work, as well as the prevention of all occupational risks.

The curative role of occupational health services must be confined to emergency treatment at the workplace in the event of accidents or sudden illness.

The preventive role of occupational health services implies action to improve working conditions and work organization so that these are geared as far as possible to the needs of the worker and so that the worker's health and safety are not jeopardized. Occupational health services must keep a close watch on all aspects of working and production conditions to ensure that they do not cause workers any physical or psychological harm.

If preventive action is to be effective occupational health services will not only have to work to improve existing working conditions but will also have to be consulted when new technologies are introduced or when new equipment or new types of work organization are envisaged. Any action must be taken before the changes are introduced and at a time when it is still possible to take account of the experience and knowledge of the occupational health services. The preventive role of occupational medicine requires a regular presence at the workplace.

For this purpose occupational medicine must be able to call on the human and technical resources needed to:

— detect occupational risks and track down health hazards;

— collect data and carry out epidemiological surveys;

— tackle working conditions as soon as premonitory signs or the first symptoms of disease manifest themselves, or as soon as signs of danger appear;

— exchange information and experience with other occupational health services and other bodies operating in the field of risk and accident prevention.

Occupational health services must be able to carry out medical examinations if such examinations can supplement the preventive action of occupational medicine with a view to detecting risks and health hazards. Such examinations cannot, however, be the sole function of occupational medicine, which must also aim to adapt work and the workplace to the worker. Medical examinations must also make it possible for workers to be assigned tasks appropriate to their physiological and psychological make-up. The autonomy of occupational health services must be guaranteed in this connection.

Confidentiality must not be used as a justification for impeding the communication of information about the occurrence of work-related diseases and industrial accidents for the purposes of epidemiological studies. The anonymity of the individuals concerned, however, must be preserved.

Doctors who practise preventive occupational medicine on a part-time basis must not be barred from also practising curative medicine away from the workplace.

5. Organization of Occupational Medicine

The Committee urges that all workers in all sectors and all undertakings, whatever their size, be covered by occupational health services. The organization of occupational health services must nevertheless be geared to the size of the undertakings, as provided for in some Member States' legislation. All undertakings must have their own service, be affiliated to a group service covering several undertakings, or have a service of any other equivalent form or structure that will guarantee the effective coverage of all workers.

The Committee considers that the preventive role of occupational health services necessitates a regular presence at the workplace. The attendance time must reflect the scale and frequency of the risks and must be long enough to allow the service to gain a real knowledge of working conditions and take proper action. The periods of attendance laid down in the legislation of various Member States must be sufficient to allow occupational health services to function effectively.

Similarly, the financial, technical and human resources available are still all too often inadequate so that the services are unable to achieve the objectives laid down by law.

Since preventive action must encompass all aspects of working conditions, occupational health services must be multi-disciplinary and employ specialists from different fields (physicians, ergonomists, safety specialists, chemists, toxicologists, etc.). Such persons must have received appropriate training.

If they are to be effective, occupational health services must liaise closely with the other bodies operating in the field of health and safety at work (e.g. safety departments, factory inspectorates) whose task is also to prevent industrial accidents and work-related diseases.

Occupational health services must also operate in liaison with those most directly affected by production methods and working conditions, viz. the workers these services are designed to help protect, and the employers. Employers are directly responsible for working conditions and production methods and are able to contribute to the development of preventive action. Workers are in daily contact with working conditions, so their personal knowledge and experience can be drawn on to increase the effectiveness of preventive action.

Workers and their representatives must be consulted on, and informed about, the organization and running of occupational health services. This must be done through the usual representative channels existing for workers in undertakings.

Works hygiene and safety committees have an important role to play here insofar as the tasks incumbent on them with regard to working conditions make them the most appropriate bodies for ensuring that the occupational health services' preventive action improves the protection afforded to workers.

Occupational health service staff must be appointed under conditions that safeguard their autonomy. Their appointment cannot therefore be left solely in the hands of the employer. The conditions governing appointments, remuneration and dismissal must be such that the staff's independence and autonomy of action is guaranteed in accordance with the ethical codes applicable to the medical and scientific professions.

The cost of occupational health services must be borne directly or indirectly by the undertakings themselves.

Preventive action has already achieved very satisfactory results in a number of undertakings.

6. Role of the Authorities

It is the employers who are primarily responsible for working conditions, and hence for the organization of occupational health services to obviate risks, industrial accidents and work-related diseases. However, it is the authorities which have the task of enforcing statutory and administrative provisions on occupational medicine.

The authorities also have the task of ensuring coordination between occupational health services and public health services and must help to gather and circulate information and findings arising out of epidemiological studies.

The authorities have a role to play in monitoring the health of workers who, after having been exposed to health hazards at the workplace, change employers or retire. Such health monitoring is necessary not only in the interests of the workers themselves but also for the purposes of acquiring knowledge of the long-term effects of exposure to certain harmful agents so that preventive action can be more effective and more to the point.

The authorities must also ensure the organization of specialist training in occupational medicine, such training being geared to multi-disciplinary action in undertakings to improve working conditions. Occupational medicine must be recognized as a specific discipline and specialized training must be given on top of basic medical training. Such training must keep abreast of changes in production technologies and work organization and this requires regular updating of knowledge.

The authorities must also help to promote research in the fields of occupational medicine and working conditions.

7. Conclusions

The Committee would like to see the adoption of a Community Directive on occupational medicine based on the principles set out in this present Opinion.

It would also emphasize the need for Community-level harmonization of statistics on industrial accidents and work-related diseases in order to facilitate the exchange of information and data.

The Committee would also like to see the Community work towards a convergence of training programmes and specialist diplomas in occupational medicine.

REPORT
of the
Section for Social Questions
on
OCCUPATIONAL MEDICINE

1. The Facts

Whatever form it takes and in whatever sector it is performed (agriculture, industry or services), work, like any other human activity, entails a certain number of risks and dangers that are liable to impair the physical and mental health of workers.

The organization of work and production, as well as production methods themselves, have repercussions not only on the health and safety of workers but also, in certain circumstances, on the external environment of the undertaking.

In spite of all the technical progress that has been made, the risks of accidents at work and of work-related diseases are still too high.

The hazards connected with work are in particular the result of:

— the organization of work and production;
— production methods;
— the agents, substances and techniques used;
— the pattern and pace of work;
— other elements going to make up the working environment.

Accidents at work and work-related diseases can be ascribed to technical shortcomings, the use of toxic products and substances, methods of organizing work and production incompatible with health and safety requirements, the inadequacy of preventive and protective measures, and the failure to analyse the effects on health and safety of new products or processes before they are introduced. They may also be the result of human shortcomings and reflect insufficient training and information about the techniques and materials used and about their effects on health and safety at work and on the regulations applicable in this sphere. This lack of information is particularly dangerous for categories of underprivileged workers, e.g. migrant workers.

Accidents at work and work-related diseases are a scourge in terms of both their frequency and their seriousness.

Although too often incomplete and disparate, the available data do show the scale of the problem and justify constant efforts to secure the adoption of various measures in order to try to limit and prevent accidents at work and work-related diseases.

In France, reported accidents at work increased from 13,492,184 in 1973 to 14,075,205 in 1980. Of these 14,075,205 accidents, 971,301 entailed absence from work, 101,821 led to permanent invalidity and 1,423 resulted in death.

The following table covers 1980[1]

Country	Workers employed	Accidents at work entailing absence from work	Fatal accidents at work
Ireland	868 000	4 330	30
Luxembourg	137 400	16 530	17
Belgium	3 230 000	210 000	250
Greece	1 668 000	47 500	250
Denmark	2 091 000	33 900	75
Italy	15 239 000	1 600 000	2 200
United Kingdom	22 834 000	400 000	700
Netherlands	4 548 000	90 000	80
France	18 133 000	971 301	1 423
Germany	22 296 000	2 158 000	3 998

(1) Source : European Commission. Other statistics are to be found in Appendix 2.

On examination it becomes immediately clear that these data are highly disparate and show a lack of homogeneity in the collection of information on accidents at work. In some countries the data also cover accidents on the way to work (e.g. Belgium, Germany); in others the statistics cover only accidents at work entailing at least three days absence from work, contrary to the situation in some countries where accidents at work are recorded as from the first day of absence. Despite this lack of comparability these data do, however, indicate the scale of the phenomenon of industrial accidents and justify the adoption of all possible measures to reduce these accidents. They highlight the urgent need for Community-level harmonization of the statistics on accidents at work and work-related diseases, as called for in the Council Resolution of 27 February 1984 on the Second Community Action Programme on Health and Safety at Work.

The data on work-related diseases are even more divergent, notably because of the disparity of the rules on notification of work-related diseases. It is noted in the aforementioned Report of the European Parliament that according to certain bodies 6% of diseases are of occupational origin whereas according to others the figure is 40%. Accidents at work and work-related diseases mean high costs for workers, employers and society at large.

Workers who are victims of industrial accidents or work-related diseases suffer not only an impairment of their physical or mental health, which is a priceless asset, but also losses of income which affect not only themselves but also their families and which are only partly offset by the benefits paid under social security schemes insofar as the workers in question are covered.

The cost of industrial accidents and work-related diseases is also a burden on undertakings. This cost is reflected first of all in employers' contributions to the social security schemes which provide benefits and treatment for the victims. It also takes the form of losses due to interruption of production and the absence from work of sick or injured workers; costs connected with the replacement of incapacitated workers, compensation, etc.

Society also bears part of the cost of these accidents and diseases through benefit schemes. To this must be added the waste of human resources resulting from incapacity and invalidity. This fact and the importance of protecting the health and safety of all explain the efforts to prevent industrial accidents and work-related diseases as far as possible.

These efforts have taken the form of numerous actions and preventive measures introduced both by legislation and under collective agreements, such as:

— the adoption of safety standards for workplaces;

— the implementation of various protective provisions covering working hours, specific categories of workers, certain occupations and activities, the use of various products and equipment, certain forms of work;

— the introduction of machinery to enable workers to be informed and consulted before new products or processes are used, particularly in the form of safety and hygiene committees and negotiations on working conditions;

— the setting-up of occupational health services and factory inspectorates with the task of protecting the health and safety of work;

— the development of training and research in the area of hygiene and safety at work, etc.

Occupational medicine is considered to be one of the pillars of an effective policy for preventing industrial accidents and work-related diseases. That is why the major principles of occupational medicine are defined in the Member States by specific laws or by specific provisions of the laws on health and safety at work. Occupational medicine is considered to be in the public interest in the Member States and to be a key element in the prevention of industrial accidents and work-related diseases and in the improvement of working conditions. Several international bodies have also studied the question of occupational medicine in depth. The International Labour Organization, for example, examined a report on occupational health services at its 70th Session in 1984. This report came after other initiatives taken earlier by the ILO.

In 1972 the Council of Europe adopted a recommendation on the harmonization of measures to protect workers' health at the workplace. This document aimed primarily to promote the development of occupational health services in the Member States of the Council of Europe.

The Community has also adopted instruments, albeit non-binding, in this field. These are in the main:

— the Commission's Recommendation of 20 July 1962 to the Member States concerning occupational medicine in undertakings;

— the Commission's Recommendation of 27 July 1966 to the Member States concerning medical check-ups for workers exposed to special hazards.

Other Community texts also refer to occupational medicine and to the need to develop it.

A particular example is the Council Resolution of 27 February 1984 concerning a Second Community Action Programme on Health and Safety at Work (OJ C 67 of 8 March 1984, p. 2).

These Community measures in the area of occupational medicine are based on Articles 100, 117, 118 and 235 of the Treaty establishing the European Economic Community. The ECSC Treaty (Article 55) and EURATOM Treaty (Title 2, Chapter III) also contain provisions justifying Community measures in the field of occupational medicine.

2. Definition of Occupational Medicine

Among the numerous definitions of occupational medicine the Section would pick out the following:

> *Occupational medicine deals with the effects of work on health and with the effects of disease on capacity for work. Its function is to prevent the impairment of workers' health that could be caused by working conditions (this includes accident prevention) and to guarantee individual workers jobs in keeping with their physiological and psychological aptitudes*[(2)].

3. The Role of Occupational Medicine

The definition of occupational medicine gives a pointer to the role of occupational medicine. All the Member States are in agreement on this basic role.

The main task of occupational health services everywhere is to prevent accidents at work and work-related diseases.

Views diverge, however, as to the scope of the curative role of occupational medicine. In certain countries this is very limited, since it is considered that the treatment of sick or injured workers should take place basically outside the undertaking and should be the responsibility of the public health services.

Under this approach, the curative role of occupational medicine is confined to emergency treatment when accidents occur or health problems manifest themselves at work.

In Belgium and France, for example, the law provides that the occupational physician has a preventive role and may not treat workers, except in cases of emergency. In Belgium the occupational physician also supervises the facilities available for emergency treatment (first-aid boxes, rest rooms, isolation rooms, supervision of first-aid workers and nurses, etc.). In the Federal Republic of Germany, occupational medicine has an essentially preventive function: a works doctor may not engage in therapeutic activity except in urgent cases and to provide emergency treatment in the event of accidents. The same applies in other countries.

(2) Source: Report of the "Specialists' Training" working party of the Advisory Committee on Medical Training attached to the Commission of the European Communities.

In Denmark, curative action may embrace the following, in addition to emergency treatment :

— advice to the worker's own doctor;

— after consulting the worker's own doctor, treatment of ailments which are caused exclusively or principally by the working environment and can only be treated effectively by changing the working conditions;

— subsequent monitoring, after consultation of the worker's own doctor.

On the other hand, it is unanimously agreed that occupational health services should not have any right to check or assess the reasons given to justify absence from work.

These limitations laid down in Member State regulations apply only to occupational medicine and, in most countries, do not prevent doctors who only practise occupational medicine on a part-time basis from also practising general medicine including curative medicine.

Nevertheless, the preventive role is considered fundamental everywhere. The prime task of occupational health services is therefore to monitor workplaces and make any recommendations that are necessary to secure optimum adaptation of working conditions and the organization of work to the worker and ensure that his health and safety are not jeopardized.

Certain national laws define this activity in the area of working conditions only in very general terms, whereas other laws are more precise and specify that occupational health services should exercise supervision and make recommendations in the following fields :

— the cleanliness of work rooms, tools and plant, and general hygiene in the undertaking;

— the risks of work-related diseases;

— the protection of workers against toxic agents (toxic products, noise, heat, etc.);

— individual protective equipment;

— the observance of regulations;

— adaptation of work to the worker;

— seats for working and relaxation and ergonomic design;

— facilities for first aid and emergency treatment;

— the stresses a worker is exposed to on account of the nature of his work, his working hours, the working environment and the pace of work such as that resulting from piece work or automation of the production process, etc.

It is often considered that the preventive role of occupational medicine should cover not only existing working and production conditions but also plans for introducing new production techniques and changes in the organization of work so that action can be taken before rather than after such plans are carried out.

In France, the occupational physician must be involved in the study of any new production technique and be informed of the nature and composition of the products employed and how they are to be used.

In Belgium, the ocupational physician is also involved, together with the head of the safety department, in examining tender specifications and orders before any new machinery or equipment is introduced into the undertaking.

In Denmark, occupational health services have to give advice regarding the design of new production techniques, the modification of existing production processes and the acquisition of new personal protective equipment. They also participate in ergonomic design/planning with a view to humanizing the working environment and the production process.

This function in the area of working conditions means that the occupational health services have to be present in the undertaking to detect hazards and determine their possible effects before the health of workers has been impaired. Where undertakings have their own occupational health services, there is a permanent presence and continuous action is possible. Where there are group occupational health services, such services must be present for a sufficient amount of time to be able to effectively carry out their preventive work even if their presence in the undertaking is not permanent.

They should also be able to take action on working conditions as soon as symptoms of disease or danger signs appear so as to stop any deterioration in the working environment and protect workers against these dangers.

The preventive task also means that occupational health services have to carry out medical examinations. These medical examinations can be of different kinds : examinations on recruitment, annual or other periodic examinations, complete medical check-ups, examinations of persons returning to work after an absence due to illness, examinations as part of special monitoring, etc. These examinations are not obligatory in all Member States. In Germany workers are not compelled to undergo medical examinations. In Belgium medical examinations are compulsory only for the following:

— workers exposed to a risk of work-related disease due to specific causes or agents;

— workers holding safety posts;

— workers in direct contact with foodstuffs;

— handicapped persons;

— workers under 21.

Some members think that periodical medical examinations should be compulsory since they enable possible diseases or incapacity for work to be detected.

Other members are against such a compulsion since they consider that regular health checks can lead to a system of worker selection and thus to adaptation of the worker to the work rather than the other way round.

At all events, periodic examinations are justified only if they are organized as part of a preventive campaign. They cannot be the sole function of the occupational physician. They serve a useful purpose when they form a back-up to the preventive role of occupational medicine aimed at detecting risks and hazards. This explains why in certain countries periodic examinations are confined to undertakings with special hazards. Periodic examinations also make it possible to continuously monitor the health of workers and take account of the phenomenon of "habituation" to hazards and difficult working conditions. Professional and medical secrecy has to be observed in connection with such periodic examinations and the exercise by specialists in occupational medicine of all their functions; this should guarantee the anonymity of the individuals concerned. Confidentiality must not, however, impede the circulation of information about the occurrence of work-related diseases for the purposes of epidemiological and statistical studies. But although the notification of various work-related diseases is compulsory in certain countries and cannot be impeded by medical secrecy, these same principles of confidentiality can still pose problems when it comes to learning about the causes of sickness and mortality for the purposes of epidemiological studies.

Occupational health services must have complete autonomy and independence in carrying out medical examinations. In view of the fact that prevention and the improvement of working conditions are the main functions of occupational medicine, the aim of medical examinations cannot be to choose, on the basis of health criteria, the workers most likely to tolerate poor working conditions. Some members consider that such a screening, either at the recruitment stage or when the worker has started on his occupational activities, eventually leads to men having to adapt to work; this is at odds with the aim of occupational medicine, which is to improve working conditions to make them acceptable to all workers.

Other members, whilst rejecting the idea of selection in the strict sense of the word, consider that occupational health services must consider the aptitude of workers to carry out the tasks to be entrusted to them and must unearth any inaptitudes or ailments which might endanger the health of the worker in question when carrying out a given task.

The concept of long as well as short-term prevention has led to occupational health services being given the task of collecting data, carrying out epidemiological investigations, and more generally conducting enquiries and research into working conditions.

It is essential to collect data and carry out investigations in order to determine the effects which working conditions have over a long period. This also enables specialists from different workplaces to compare experience and make use of the experience of others in order to develop their knowledge and so improve the quality of their own preventive action.

Effective prevention in the field of occupational medicine also pre-supposes an exchange of information not only between occupational physicians themselves but also between occupational physicians on the one hand, and all the specialists and bodies operating in the field of health hazard, and accident prevention, on the other.

The role and efficiency of occupational medicine also depend directly on the skills and specializations of those making up the services.

4. Organization of Occupational Medicine

The concept of the role of occupational medicine determines in many respects the organizational requirements of occupational health services so that the latter can effectively play their role.

The importance of the role of occupational medicine in health protection and industrial safety is such that all workers ought to be covered by occupational health services.

This is so in Belgium, France and Germany but not the case in other countries. In practice, however, temporary workers and domestic staff have not so far been covered by occupational health schemes in Belgium. In France agricultural workers are covered by specific provisions.

In Germany about 11 million of the 22 million workers in employment were actually covered at the end of 1981, with most of those not covered working in SMEs. In Denmark occupational health services are not obligatory in all branches of the economy and for all workers. (On 1 July 1982 368,000 workers were in fact covered). In the Netherlands occupational health services are only obligatory in undertakings employing more than 500 workers. In Ireland medical supervision at work has not been put on a permanent footing but is something decided on by the Ministry of Labour on a case-by-case basis and in the light of accident risks, the likelihood of occupational disease and health hazards. In Greece the law does not impose mandatory occupational health services. Nor are they compulsory in the United Kingdom. It should be added that in certain countries such as Italy, Ireland, Luxembourg and the United Kingdom occupational medicine either goes beyond the scope prescribed by the law or, in the absence of legal provisions, is available in a large number of big or medium-sized firms.

The organization of occupational medicine is generally geared to the size of the undertaking in question. The biggest undertakings generally have their own occupational health services whereas medium-sized and small undertakings are usually affiliated to group services covering several firms.

In France occupational health services can legally take the following forms :

— an occupational health service for an individual firm or establishment, where the occupational physician has to devote at least 169 hours per month to his duties;

— a group occupational health service, where the occupational physician does not need to devote more than 20 hours per month to his duties; if an inter-establishment health service can be set up between more than one establishment of the same enterprise, the physician must devote at least 20 hours per month to his duties.

Between these two limits the occupational health service can take the form — after a consulation of the Works Council — of (a) an individual firm's or individual establishment's health service, (b) an inter-establishment health service of the same firm, or (c) a group occupational health service.

In the other countries of the European Community occupational health services are generally organized along very similar lines.

Occupational medicine and the organization thereof are also geared to the importance of the risk (e.g. handling of toxic substances). Nevertheless, some high-risk sectors would not seem to have the occupational health services warranted by the seriousness of the risk (e.g. health services, agriculture, etc.).

Prevention in occupational medicine pre-supposes a regular presence at the workplace. It implies that occupational health specialists have the necessary time to carry out their preventive work at the workplace and also have the necessary equipment. In certain cases the legal requirements concerning time are negligible. In France the occupational physician has to be present a minimum of one hour a month per :

— 20 salaried staff
— 15 manual workers
— 10 wage-earners, including temporary workers subject to special supervision.

This minimum therefore varies between 3 and 6 minutes per month per worker. The law also specifies that the occupational physician must be able to devote a third of his working time to the working environment, i.e. the supervision of working conditions, the rest of the time being devoted to other activities (e.g. clinical work).

In Belgium the law stipulates that an undertaking must be visited by an occupational physician at least once a year.

The number of physicians attached to an occupational health service is determined by the requirement that each year an occupational physician must, in each undertaking or each establishment, devote an average of at least one hour of his professional time to each worker subject to compulsory medical examination and eight minutes to each worker not subject to compulsory medical examination.

Other national laws confirm the need to tackle the problem of working conditions, which implies the presence of a physician at the workplace. The provisions fail, however, to specify the minimum duration of this presence.

The obligation to be present at the workplace poses the question of occupational health service staff numbers. It would seem that the objectives laid down in the legislative provisions of certain countries have not been achieved in practice because of the inadequacy of the financial, technical and human resources made available to occupational medicine.

A Commission report on occupational medicine in the Member States (cf. Appendix) gives the following figures concerning occupational physicians.

COUNTRY	YEAR	FULL-TIME OPs	PART-TIME OPs
BELGIUM	1977	215	667
DENMARK	1978	5	95
GERMANY	1979	2,100	6,700
FRANCE	1978	2,297	3,229
ITALY	1977	2,500	altogether
NETHERLANDS	1979	320	70
UNITED KINGDOM	1979	800	1,200

The complexity of the different types of preventive work encompassing all aspects of working conditions means that the occupational health services must have a multidisciplinary character and that the staff making up the service must have received an appropriate multidisciplinary training.

The term occupational medicine may therefore be somewhat misleading, giving the impression as it does that the service is confined to medical problems in the strict sense of the word.

However, the definition of the role of occupational medicine, and practical experience with the protection of health and safety at the workplace, indicate that occupational health services cannot be limited solely to medical matters and solely to physicians specialized in that field. The work of the occupational physician means sometimes involving the disciplines, and securing the contribution of, specialists in other fields.

Thus, for example, action in the field of work-station design requires ergonomic knowledge and skills. It must also be possible to call in safety specialists, psychologists and chemists, for example.

Occupational health thus involves the work of a team of specialists capable of tackling all aspects of working and production conditions, experienced in multidisciplinary action at the workplace and trained with this in mind. Within this multidisciplinary team all specialists must be on an equal footing.

In a certain number of cases national legislation makes provision for cooperation between physicians and technicians concerned with working conditions (notably safety specialists and safety departments) on the one hand, and other specialists (e.g. radiologists, biologists, physicists, chemists, toxicologists, etc.) on the other.

Such cooperation is not generally put on an official footing.

The work of occupational health services also needs to be coordinated with that of other bodies likewise responsible for health and safety at work (e.g. the factory inspectorate) particularly in respect of the coordination of methods of action.

Occupational health services also cooperate closely with those most directly affected by production methods and working conditions, viz. workers, and also employers, who are responsible for the organization of work and production. Workers, whom it is the task of occupational medicine to protect, are the group most affected by working conditions, and their personal experiences and knowledge must be taken into consideration by occupational medicine.

Workers and their representatives are generally involved in the organization and running of occupational health services through the usual representative channels existing in undertakings. Depending on the country, this involvement may be through trade union delegations, staff delegates or works committees. Works hygiene and safety committees most frequently have a capital role to play here insofar as they have wide responsibilities for working conditions and would therefore seem to be the most capable of influencing occupational medicine and steering it towards the most appropriate preventive action.

Occupational health services are generally financed directly or indirectly by the undertakings themselves.

In many countries employers have sole responsibility for the appointment of occupational health specialists and do not have to consult workers' representatives.

In Belgium, however, the works' hygiene and safety committee or, failing that, the trade union delegation, is consulted before the group ocupational health service and the occupational physician are chosen.

Some members consider that the financing of occupational medicine by the employer should not jeopardize the autonomy of the occupational health services. Occupational health service staff should be able to perform their duties independently. The conditions governing their appointment, remuneration and dismissal must be such that they are not placed in a situation of dependence vis-à-vis the undertaking. This thinking is in accord with the ethical principles governing the medical and scientific professions involved in occupational health services. Competition between group medical services regarding the cost of their services should not be allowed to lead to a lower level of worker protection against work-related risks.

Some members consider, however, that the autonomy of the occupational physician can be taken for granted and therefore does not need to be explicitly catered for or guaranteed. It must, however, be strictly limited to medical activities proper.

5. The Role of the Authorities

In all EEC countries the authorities involve themselves in occupational medicine in a variety of ways. First of all they make sure that the legal provisions and regulations covering occupational medicine take account of changes in production and working conditions and can be adapted to the latest advances in the field of health and safety.

The authorities are further responsible for ensuring that legal provisions and regulations are implemented, whilst the professional associations of the various specializations making up the occupational health services are responsible for ensuring that occupational medicine specialists abide by the professional and ethical rules to which they are subject.

Public health authorities have a key role to play in monitoring the health of workers, particularly those workers who leave their occupations after having been exposed to health hazards at the workplace. Such health monitoring is necessary not only in the interests of the workers themselves but also for the purposes of acquiring a better knowledge of the long-term effects of occupational health hazards. Indeed, some work-related diseases manifest themselves only several years after exposure to harmful agents. This is the case with asbestosis and types of cancer associated with the workplace. Moreover the evolution of such diseases and the development of various types of occupational invalidity (e.g. work-related deafness) can be very slow and affect workers even if they change or terminate their jobs. The public health authorities themselves are in the best position to ensure the monitoring of the health of workers affected with a view to the best possible treatment and can make sure that the information resulting from medical analyses and the treatment of patients is passed on to occupational medicine specialists, thus enabling them to take more effective preventive action.

On a more general level the authorities must ensure coordination between the work of public health services and occupational health services.

The authorities must also ensure the organization of specialized training in occupational medicine. Although the occupational physician needs basic medical training like any other doctor, he also needs specialized training geared to work in a multidisciplinary team in an undertaking to improve working conditions.

This training must be adapted to changes in technologies, production methods and working conditions. It must be practical, geared to the working environment and prevention at the workplace, and regularly brought into line with the state of the art.

So far, occupational medicine has not been recognized as a specific discipline in the universities or professional training establishments of all EEC countries.

In Belgium, the practice of occupational medicine is reserved for those holding a special degree in occupational medicine. In Denmark the teaching of occupational medicine was only recognized as a specific discipline in 1982. In Italy the possession of a diploma in occupational medicine is not required to work as an occupational physician in an undertaking. In Germany the title of specialist in occupational medicine is granted to doctors only after four years of specific, additional training.

In France the rules stipulate that the practice of occupational medicine is reserved for doctors holding a higher certificate of specialization (certificat d'études spécialisées) regardless of the sector.

The authorities have a similar task with regard to the training of other health and safety specialists and technicians.

The authorities also contribute to the promotion of research into occupational medicine. On a more general level they seek to improve working conditions and have the task of coordinating the activities of public health services and occupational health services.

They are also responsible for making occupational medicine part and parcel of the health services in general. Health at the workplace cannot in fact be treated in isolation from the organization, structures and operation of public health services.

6. Action to be Taken at Community Level

The existence of legislation on occupational medicine in most countries of the European Community makes it easier to adopt Community instruments in this field than in other areas concerned with working conditions.

The non-binding recommendations adopted by the Commission in the 1960s have paved the way for such action.

However, since the adoption of these recommendations, production techniques and methods — and consequently national legislation — have evolved.

Several arguments can be adduced to justify the adoption of a Community Directive on occupational medicine. Amongst them is the recognition that occupational medicine is in the public interest and the consequent conclusion that all Community workers should be covered by occupational health services as effectively as possible.

Despite efforts in this direction, total coverage has not yet come about. Some members consider that a Community Directive is the most appropriate way of achieving this objective. Other members express no views as to the form that a Community instrument on occupational medicine should take.

The geographical mobility of workers is on the increase because of the existence of the Community and also because the economic crisis is causing workers to look for employment further and further afield. Labour mobility is increasingly tending to transcend national borders. The convergence of national legislation in a number of areas would pave the way for improvements in continuous health care for workers and so make it possible to organize more effective prevention in all countries.

Likewise, the technologies used in all branches of industry are tending to be increasingly similar whatever the Member State. These new technologies, which imply changes in the organization of work, have effects on the physical and mental health and on the safety of workers. These effects have not always been studied in sufficient depth, so it would be desirable to exchange knowledge and give more uniformity to preventive action. The proliferation of new products is another reason for closer coordination of prevention, in which occupational medicine plays a key role.

Thus, in addtion to the adoption of a Directive on occupational medicine, there should be better dissemination of information on work-related diseases, industrial accidents and methods of prevention in the fields of health and safety at the workplace, e.g. in the form of a data bank. Parallel efforts should be made by the Community to improve and harmonize statistics on industrial accidents and work-related diseases. This pre-supposes Community standardization of the definitions of industrial accidents and work-related diseases.

Such harmonization could, as the Statistical Office of the European Communities proposes, be carried out in three stages:

— compilation of available national data on industrial accidents and work-related diseases;

— preparation of a standard form for the reporting of industrial accidents and work-related diseases;

— drawing up of harmonized Community statistics.

Alignment of training programmes and specialist diplomas in occupational medicine is also desirable.

In conclusion, the observations contained in the present Report argue the case for the adoption of a Community Directive on occupational medicine, with priority being given to the following principles :

— cover should be provided for all workers, including workers in SMEs and traditionally less protected sectors such as agriculture;

— top priority should be given to prevention;

— sufficient funds should be made available to carry out this preventive work;

— occupational health services should be present in undertakings themselves;

— occupational health services should be informed about the effects of products and production processes on health and safety;

— occupational health services should be consulted before new products or production methods are introduced and before changes are made in work organization;

— occupational medicine should be multidisciplinary in nature;

— occupational medicine should be independent and autonomous;

— there should be coordination between occupational health services and other bodies having responsibilities in the field of health and safety at work;

— workers' representatives should be informed and consulted on the organization and operation of occupational health services;

— the cost of occupational health services should be borne by the undertakings themselves;

— occupational medicine should become part and parcel of overall preventive policies;

— the training of specialists in occupational medicine should be geared to the tasks of occupational health services;

— the authorities should provide for continued monitoring of the health workers exposed to, or affected by, health hazards or specific risks;

— research in the area of occupational medicine and working conditions should be developed with the support of the authorities.

These various points have been expounded in greater detail in the earlier parts of this Report.

OCCUPATIONAL MEDECINE IN THE EUROPEAN COMMUNITY (9 Member States)

EC (9)	FIELD OF APPLICATION			ORGANIZATION	THE OCCUPATIONAL PHYSICIAN			
	special Law	± part of health and hygiene regulations or practices			Functions	Status	Training	Number Full time / Part time
B	X		- all wage earners and employers	- Individual or group services (employer) (association; administrative board) - surveillance of sanitation hazards, protection against harmful substances, job adaptation, fatigue, refreshments, accommodation; - first aid and emergency treatment, medical examinations and vaccinations	- on the spot treatment - monitors wage earners' health aptitudes and adaption to work - contacts with health and safety committees - submits reports on hazards and occupational diseases - compiles wage earners' medical records	- employment contract with the employer or with the administrative board of the group medical service, after approval by the safety and health committee or the joint committee of the group occupational health service with regard to both appointment and dismissal, - or self-employed contract, - technical and ethical independence vis-à-vis the employer and workers guaranteed by law	- basic qualification - 1 - 2 years further training - in-service training	1977 215 / 667
DK	X		- not compulsory in all branches of activity	- generally not a highly developed structure	- no specific definition; tasks in practice include: - prevention of accidents and work-related diseases (examinations, check-ups, monitoring, etc.) - first aid and emergency treatment, medical examinations and vaccinations	- no strict contract conditions - financed by the employer	.....	1978 5 / 95
D	X		- compulsory in most undertakings (very complex definitions)	- no statutory organizational form for the health surveillance of workers - organization ensured by a physician or by a joint occupational health centre (group scheme: association, or accident insurance funds) - an occupational safety committee must be set up by the employer	- on the spot treatment - monitors occupational health and safety, and preventive measures - assists and advises employer - informs workers (works council) - medical check-ups (under official authorization or from accident insurance fund) - collaborates with occupational safety committee	- normally a salaried employee - directly subordinate to the manager of the undertaking or plant - appointment, dismissal and definition of specific responsibilities must also be referred to the works council	- basic qualification - further 2 years training - 4 years specialist training	1979 2 100 / 6 700
F	X		- all employers and wage earners - agricultural sector	- individual or group services - occupational health services for the agricultural community exist in all departments (obligatory for farm workers, optional for farmers)	- preventive measures - factory inspection - advises employer, departmental heads, works committee, staff delegates, the hygiene and safety committee and wage earners - first aid	- employment contract with employer (except in agriculture) - appointment and dismissal subject to approval of works or plant committee	- basic qualification - 2 years further training - in-service training	1978 2 297 / 3 229

OCCUPATIONAL MEDECINE IN THE EUROPEAN COMMUNITY (9 Member States)

EC (9)	FIELD OF APPLICATION			ORGANIZATION	THE OCCUPATIONAL PHYSICIAN			
	special Law	± part of health and hygiene regulations or practices			Functions	Status	Training	Number Full time / Part time
IRL		X	- majority of undertakings with 500 or more employees	- larger undertakings: medical service - some smaller undertakings: one physician - group service (about 21 in existence)	- no statutory definition, but normally responsible for emergency treatment and prevention	- the Irish Society of Occupational Medicine makes recommendations on rates, generally accepted by employers	- basic qualification - courses - in-service training (there is only one specialized centre for occupational medicine in Ireland)	-----
I		X	- in practice nearly all large and medium-sized undertakings	- individual or group services (employers or ENPI/National Health Service)	- emergency treatment		- basic qualification - some specialised courses ± 3 years	1977 2 500 in total
L		X	- in practice all major undertakings and some SMEs	- individual, with no state authorization or supervision - financed by the employer	- emergency treatment - prevention (examinations, vaccinations and inspections)	- individual contracts - staff representatives play no role in recruitment or dismissal	- there is no medical school in Luxembourg for training occupational physicians	-----
NL	X		- by law for all undrtakings with more than 750 employees (soon to be 500)	- individual or group services (employer) (non-profit) - Occupational Health Council for authorization, appointments, servicing and monitoring	- emergency treatment - prevention (examinations, monitoring, etc.)	- appointments and dismissals under the authorization of the National Occupational Health Council	- basic qualification - specialized training	1979 320 / 70
UK		X	- not compulsory	- individual or group services	- emergency treatment - preliminary treatment of serious work-related diseases - prevention (examination on recruitment, inspections, advice)	- individual contract with the employer	- basic qualification - specialized training varying from 6 months to 2 years	1979 800 / 1 200

Appendix 1 (cont.)

Appendix 2

Occupational injuries
Lésions professionnelles
Lesiones profesionales

Persons injured and workdays lost
Personnes accidentées et journées de travail perdues
Personas accidentadas y días de trabajo perdidos

(A)	Number of persons injured (thousands):	Personnes accidentées (milliers):	Personas accidentadas (millares):
1.	- of whom fatally injured	- blessées mortellement	- casos mortales
2	- of whom with lost workdays	- ayant perdu des journées de travail	- con pérdida de días de trabajo
(B)	Number of workdays lost (thousands)	Journées de travail perdues (milliers)	Días de trabajo perdidos (millares)

Pays - Type	Total	Industrie (branches) [a] 1 Agriculture, chasse, sylviculture et pêche	2 Industries extractives	3 Industries manufacturières	4 Electricité, gaz, eau	5 Construction	6 Commerce, restaurants et hôtels	7 Transports, entrepôts, communications	8 Banques, assurances, aff. imm., serv. aux entreprises	9 Services à collectivité, services soc. et pers.	0 Activités mal désignées
Denmark (I)											
1978											
(A)	31.252	0.921	0.053	16.502	0.553	3.258	1.589	2.965	0.183	5.228	.
1.	0.093	0.019	0.001	0.028	0.002	0.017	0.006	0.011	-	0.009	.
1979											
(A)	34.295	0.910	0.050	17.310	0.597	3.454	1.889	3.959	0.262	5.864	.
1.	0.099	0.024	-	0.022	0.002	0.015	0.013	0.010	0.001	0.012	.
1980											
(A)	33.883	0.952	0.029	16.742	0.592	3.484	1.847	3.619	0.298	6.320	.
1.	0.075	0.018	-	0.015	-	0.014	0.010	0.010	0.002	0.006	.
1981											
(A)	34.055	0.987	0.048	15.591	0.550	3.622	1.842	4.006	0.335	7.074	
1.	0.086	0.031	0.001	0.012	0.001	0.016	0.008	0.008	0.002	0.007	.
France (I)											
1978											
(A)	2 039.05	.	.	.	.	.	.	.	.	.	.
1.	1.567	.	.	0.510	0.004	0.500	0.124	0.225	.	0.204	.
2.	1 014.05	.	.	526.44	3.52	250.73	54.95	52.71	.	125.70	.
(B)	29 086.1	.	.	13 271.1	95.7	8 676.1	1 549.0	1 876.4	.	3 617.9	.
1979											
(A)	2 025.32	.	.	.	.	.	.	.	.	.	.
1.	1.484	.	.	0.440	0.006	0.522	0.111	0.218	.	0.193	.
2.	979.58	.	.	503.89	3.54	237.53	53.78	53.84	.	126.99	.
(B)	27 585.2	.	.	12 376.2	92.2	8 136.6	1 513.4	1 859.6	.	3 607.1	.
1980											
(A)	2 008.41	.	.	.	.	.	.	.	.	.	.
1.	1.423	.	.	0.433	0.006	0.468	0.089	0.234	.	0.193	.
2.	971.30	.	.	485.90	3.51	239.41	54.28	52.71	.	135.50	.
(B)	27 268.9	.	.	11 948.4	88.3	8 108.1	1 502.4	1 824.2	.	3 797.4	.
1981											
(A)	...	.	.	.	.	.	.	.	.	.	.
1.	1.423	.	.	0.458	0.004	0.445	0.108	0.215	.	0.193	.
2.	923.06	.	.	449.03	3.47	231.21	52.83	51.90	.	134.62	.
(B)	26 821.4	.	.	11 428.5	98.1	8 089.1	1 482.9	1 831.1	.	3 891.7	.
Germany, Fed. Rep. of (II)											
1978											
(A)	2 011.80	205.07	53.70	909.02	.	299.35	.	.	.	.	544.64
1.	4.182	0.747	0.197	1.342	.	0.619	.	.	.	.	1.277
1979											
(A)	2 135.28	207.46	53.16	965.16	.	315.32	.	.	.	.	594.18
1.	4.083	0.667	0.184	1.322	.	0.688	.	.	.	.	1.222
1980											
(A)	2 112.81	207.14	52.87	948.77	.	324.96	.	.	.	.	579.06
1.	3.794	0.641	0.193	1.246	.	0.641	.	.	.	.	1.073
1981											
(A)	1 960.78	198.25	51.37	856.47	.	297.23	.	.	.	.	557.46
1.	3.638	0.597	0 153	1.188	.	0.564	.	.	.	.	1.136

Source : Labour Statistics Yearbook, ILO Geneva.

Occupational injuries
Lésions professionnelles
Lesiones profesionales

Persons injured and workdays lost
Personnes accidentées et journées de travail perdues
Personas accidentadas y días de trabajo perdidos

(A) Number of persons injured (thousands):	Personnes accidentées (milliers):	Personas accidentadas (millares):
1. - of whom fatally injured	- blessées mortellement	- casos mortales
2. - of whom with lost workdays	- ayant perdu des journées de travail	- con pérdida de días de trabajo
(B) Number of workdays lost (thousands)	Journées de travail perdues (milliers)	Días de trabajo perdidos (millares)

Country - Type	Total	Industry (major divisions) [a] 1 Agriculture, hunting, forestry and fishing	2 Mining, quarrying	3 Manufacturing	4 Electricity, gas, water	5 Construction	6 Trade, restaurants and hotels	7 Transport, storage, communication	8 Financing, insurance, real estate, business services	9 Community, social and personal services	0 Activities not adequately defined
Ireland (I)											
1978											
(A)	4.073	...	0.013	3.496	0.078	0.487	...	...	...	...	.
1.	0.026	...	0.004	0.013	-	0.009	...	...	...	...	.
1979											
(A)	3.633	...	0.018	3.129	0.087	0.399	...	...	...	...	.
1.	0.032	...	0.002	0.021	0.001	0.008	...	...	...	...	.
1980											
(A)	4.330	...	0.017	3.687	0.061	0.565	...	...	...	...	.
1.	0.030	...	0.001	0.010	0.002	0.017	...	...	...	...	.
1981											
(A)	3.865	...	0.027	3.191	0.077	0.570	...	...	...	...	.
1.	0.021	...	0.001	0.014	0.001	0.005	...	...	...	...	.
1982											
(A)	4.671	...	0.028	3.807	0.073	0.763	...	...	...	...	.
1.	0.016	...	0.004	0.005	...	0.007	...	...	...	...	.
Netherlands (I)											
1978											
(A)	87.068	2.875	0.113	37.446	0.043	23.349	12.464	6.533	2.181	0.848	1.216
1.	0.082	0.001	-	0.024	-	0.032	0.008	0.016	0.001	-	-
2.	86.986	2.874	0.113	37.422	0.043	23.317	12.456	6.517	2.180	0.848	1.216
1979											
(A)	87.297	3.287	0.147	35.305	0.033	22.507	13.143	6.755	2.667	1.982	1.471
1.	0.073	0.003	-	0.027	-	0.021	0.007	0.012	0.002	-	0.001
2.	87.224	3.284	0.147	35.278	0.033	22.486	13.136	6.743	2.665	1.982	1.470
1980											
(A)	85.820	3.389	0.180	35.086	0.027	22.356	13.254	6.536	2.667	2.325	-
1.	0.088	0.002	-	0.020	-	0.033	0.007	0.017	0.005	0.004	-
2.	85.732	3.387	0.180	35.066	0.027	22.323	13.247	6.519	2.662	2.321	-
1981											
(A)	75.515	2.900	0.127	31.061	0.025	19.767	11.780	5.261	2.342	2.252	-
1.	0.062	0.001	-	0.012	-	0.028	0.008	0.012	0.001	-	-
2.	75.453	2.899	0.127	31.049	0.025	19.739	11.772	5.249	2.341	2.252	-
United Kingdom (II)											
1978											
2.	597.800	10.350	74.600	247.600	12.300	68.150	51.150	41.800	3.500	55.400	32.950
(B)	15 233.4	273.5	1 942.4	6 122.5	288.9	1 801.5	1 175.9	1 180.1	81.8	1 487.6	879.0
1979											
1.	0.691	0.057	0.079	0.180	0.011	0.129	0.043	0.129	0.010	0.032	0.021
2.	581.0	...	...	...	...	...	...	...	...	...	...
(B)	...	...	...	...	...	...	...	...	...	...	...
1980											
1.	0.628	0.040	0.073	0.151	0.009	0.131	0.040	0.121	0.008	0.037	0.018
2.	509.000	13.000	58.000	197.000	11.000	54.000	43.000	39.000	4.000	57.000	33.000
(B)	12 771.5	315.1	1 342.5	4 742.4	259.0	1 396.8	942.9	1 099.9	119.3	1 622.9	930.7
1981											
1.	0.502	0.030	0.056	0.128	0.012	0.081	0.033	0.100	0.010	0.041	0.011
2.	421.000	8.000	48.000	148.000	10.000	48.000	43.000	30.000	3.000	55.000	27.000
(B)	10 586.2	227.8	1 206.8	3 704.9	266.9	1 238.0	938.2	871.5	104.1	1 410.3	617.6

Source : Labour Statistics Yearbook, ILO Geneva.

Appendix 2 (cont.)

Social protection — Protection sociale — Sociale bescherming

Occupational accidents in the iron and steel industry
Frequency rates for accidents

Accidents de travail dans la sidérurgie
Taux de fréquence des accidents

Arbeidsongevallen in de ijzer- en staalindustrie
Frequentie der arbeidsongevallen

(per Mio hrs/par Mio h/per Mio uren)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1981/1977 %	1981/1980 %
3.5.13. Fatal accidents — Accidents mortels — Ongevallen met dodelijke afloop												
Belgique/België	0,15	0,30	0,17	0,15	0,10	0,10	0,11	0,12	0,11	0,13	125	121
Danmark	:	:	0,33	0,24	0	0	0	0	0	0	100	100
BR Deutschland	0,11	0,18	0,13	0,13	0,14	0,08	0,06	0,12	0,08	0,09	105	102
Ἑλλάδα	:	:	:	:	:	:	:	:	:	:	:	:
France	0,13	0,09	0,13	0,13	0,10	0,07	0,06	0,05	0,03	0,06	95	185
Ireland	:	:	0	0	0	0	0	0	:	:	:	:
Italia	0,12	0,8	0,14	0,06	0,06	0,08	0,09	0,06	0,09	0,04	52	45
Luxembourg	0,09	0,14	0,35	0,20	0,17	0,06	0,17	0,29	0,08	0,13	225	171
Nederland	0,17	0,08	0,08	0,04	0,12	0	0,03	0,09	0,06	:	:	:
United Kingdom	:	0,15	0,08	0,10	0,04	0,05	0,04	0,05	:	0,06	108	:
EUR 10*	:	:	**0,13**	**0,12**	**0,11**	**0,07**	**0,06**	**0,06**	:	:	:	:
España	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	:	:	:	:	:	:	:	:	:	:	:	:
Sverige	0,10	0,04	0,06	0,08	0,06	0,05	0,04	0,01	0,01	:	:	100
USA	:	:	:	:	:	:	:	:	:	:	:	:
Nippon (Japan)	:	:	:	:	:	:	:	:	:	:	:	:
3.5.14. Non-fatal accidents (> 3 days' absence) Establishments with 4 000 – 7 999 employees — Accidents non mortels (> 3 jours d'absence) Établissements occupant 4 000 – 7 999 salariés — Ongevallen zonder dodelijke afloop (onderbreking van > 3 dagen) Vestigingen met 4 000 – 7 999 werknemers												
Belgique/België	93	87	90	76	80	84	76	91	74	66	79	89
Danmark	:	:	:	:	:	—	—	—	—	—	—	—
BR Deutschland	86	98	93	80	84	59	54	51	58	46	78	80
Ἑλλάδα	:	:	:	:	:	:	:	:	:	:	:	:
France	57	61	72	81	85	55	61	53	:	40	72	:
Ireland	:	:	:	:	:	—	—	—	—	—	—	—
Italia	65	73	78	90	90	70	74	83	75	76	110	102
Luxembourg	82	79	79	68	75	56	58	62	61	50	90	82
Nederland	—	—	—	—	—	—	—	—	—	:	—	—
United Kingdom	:	:	:	:	:	19	14	15	:	15	78	:
EUR 10*	:	:	:	:	:	**55**	**55**	**61**	:	:	:	:
España	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	:	:	:	:	:	:	:	:	:	:	:	:
Sverige	:	:	:	:	:	:	:	20	18	:	:	90
USA	:	:	:	:	:	:	:	:	:	:	:	:
Nippon (Japan)	:	:	:	:	:	:	:	:	:	:	:	:
3.5.15. Non-fatal accidents (> 3 days' absence) All establishments — Accidents non mortels (> 3 jours d'absence) Tous établissements — Ongevallen zonder dodelijke afloop (onderbreking van > 3 dagen) Alle vestigingen												
Belgique/België	82	85	86	74	81	82	75	85	77	72	88	94
Danmark	:	:	63	65	59	44	51	54	53	45	104	85
BR Deutschland	90	96	90	79	80	54	54	56	58	48	88	83
Ἑλλάδα	:	:	:	:	:	:	:	:	:	:	:	:
France	68	71	77	80	76	49	51	50	45	39	79	88
Ireland	:	:	45	39	49	33	27	34	:	:	:	:
Italia	95	102	105	107	104	97	96	97	89	84	87	95
Luxembourg	79	76	79	68	73	51	54	60	60	47	91	78
Nederland	40	42	38	34	32	21	25	29	31	:	:	:
United Kingdom	:	29	29	25	25	19	18	19	:	16	87	:
EUR 10*	:	:	**72**	**67**	**67**	**49**	**49**	**51**	:	:	:	:
España	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	:	:	:	:	:	:	:	:	:	:	:	:
Sverige	45	46	53	54	47	45	51	23	22	:	:	96
USA	:	:	:	:	:	:	:	:	:	:	:	:
Nippon (Japan)	:	:	:	:	:	:	:	:	:	:	:	:

* EUR 9.

Source : EUROSTAT

Social protection

Protection sociale

Sociale bescherming

Occupational accidents in the iron and steel industry
Days lost per non-fatal accident (at least 1 day's absence)

Accidents de travail dans la sidérurgie
Journées perdues par accident non-mortel (1 jour d'arrêt au moins)

Arbeidsongevallen in de ijzer- en staalindustrie
Dagen verloren per ongeval zonder dodelijke afloop (onderbreking van ten minste 1 dag)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1981/1977	1981/1980
3.5.16.	**Steelworks**			**Aciéries**			**Staalfabrieken**				%	
Belgique/België	12,7	11,9	12,2	14,4	12,8	14,8	13,4	14,8	15,9	13,6	92	86
Danmark	:	:	16,2	13,3	18,4	12,8	14,9	13,8	23,3	10,1	79	44
BR Deutschland	18,6	16,8	17,2	18,4	18,1	18,3	19,2	18,4	18,6	17,4	95	93
Ἑλλάδα	:	:	:	:	:	:	:	:	:	:	:	:
France	28,4	28,0	26,3	27,6	25,8	27,8	27,4	28,1	34	37,1	133	109
Ireland	:	:	18,8	14,9	33,2	32,2	19,2	43,0	:	:	:	:
Italia	15,5	16,1	16,4	16,1	14,7	13,4	13,9	13,4	12,8	14,9	111	116
Luxembourg	22,2	20,6	21,4	24,8	21,0	19,4	24,4	26,3	25,2	26,3	135	104
Nederland	22,2	23,6	21,9	28,3	23,0	22,3	21,2	22,1	23,3	:	:	:
United Kingdom	:	:	:	:	:	19,2	25,9	25,8	28,1	26,3	137	93
EUR 10•	:	:	:	:	:	**18**	**18**	**18**	**18**	:	:	:
España	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	:	:	:	:	:	:	:	:	:	:	:	:
Sverige	:	:	:	:	:	:	:	:	:	:	:	:
USA	:	:	:	:	:	:	:	:	:	:	:	:
Nippon (Japan)	:	:	:	:	:	:	:	:	:	:	:	:
3.5.17.	**Rolling mills etc. [1]**			**Laminoirs etc. [1]**			**Walserijen enz. [1]**					
Belgique/België	13,3	13,2	13,7	14,9	16,0	16,3	15,7	15,0	16,6	14,1	87	85
Danmark	:	:	18,6	19,8	17,9	24,9	19,9	13,7	19,2	21,7	87	113
BR Deutschland	17,4	16,3	17,5	17,9	17,2	16,6	18,6	17,5	18,7	18,1	109	97
Ἑλλάδα	:	:	:	:	:	:	:	:	:	:	:	:
France	27,8	27,5	26,0	27,0	25,2	26,4	28,0	28,1	34	33,6	127	100
Ireland	:	:	44,3	25,0	26,2	44,7	29,5	38,0	:	:	:	:
Italia	18,2	16,8	17,0	15,8	14,7	13,8	14,0	14,1	14,1	15,9	115	112
Luxembourg	24,0	23,0	21,5	23,8	23,9	22,0	22,2	26,9	22,5	25,3	115	113
Nederland	22,3	21,8	21,2	23,4	27,7	20,3	27,5	22,8	24	:	:	:
United Kingdom	:	:	:	:	:	23,1	22,1	23,2	23,5	28,7	124	122
EUR 10•	:	:	:	:	:	**18**	**19**	**19**	**19**	:	:	:
España	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	:	:	:	:	:	:	:	:	:	:	:	:
Sverige	:	:	:	:	:	:	:	:	:	:	:	:
USA	:	:	:	:	:	:	:	:	:	:	:	:
Nippon (Japan)	:	:	:	:	:	:	:	:	:	:	:	:
3.5.18.	**All iron and steel activity**			**Ensemble de l'activité sidérurgique**			**Gehele ijzer- en staalindustrie**					
Belgique/België	13,1	12,9	13,2	14,2	14,5	15,0	14,2	14,4	15,7	14,2	95	90
Danmark	:	:	17,2	14,6	16,7	19,4	16,6	13,8	19,4	16,6	86	85
BR Deutschland	17,4	16,4	16,8	17,6	17,1	16,9	17,8	17,5	17,6	17,6	104	100
Ἑλλάδα	:	:	:	:	:	:	:	:	:	:	:	:
France	27,6	27,4	26,4	26,9	25,2	27,2	27,1	27,9	33	34,7	128	105
Ireland	:	:	34,5	19,2	30,8	42,3	25,9	36,4	:	:	:	:
Italia	16,6	16,0	16,0	15,4	14,3	12,9	13,2	13,2	12,8	14,6	113	114
Luxembourg	22,2	22,3	22,2	22,8	22,2	22,1	21,8	24,9	23,3	25,1	114	108
Nederland	23,3	22,6	24,3	25,7	24,6	22,1	24,7	23,8	24,0	:	:	:
United Kingdom	:	:	:	:	:	25,3	24,7	25,5	25,3	29,8	118	118
EUR 10•	:	:	:	:	:	**18**	**18**	**19**	**19**	:	:	:
España	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	:	:	:	:	:	:	:	:	:	:	:	:
Sverige [2]	20,9	21,0	21,5	20,1	22,5	20,8	20,3	19	20	:	:	105
USA	:	:	:	:	:	:	:	:	:	:	:	:
Nippon (Japan)	:	:	:	:	:	:	:	:	:	:	:	:

[1] The department *rolling mills* also include tinning, lead coating and galvanizing workshops.
[2] Ironworks and steelworks (incl. rolling mills etc.)
• EUR 9.

[1] Le service *laminoirs* comprend également les ateliers d'étamage, galvanisation et plombage.
[2] Sidérurgie (y compris laminoirs, etc.)

[1] De bedrijfsafdeling *walserijen* omvat tevens vertinningen, verlodings- en galvaniseerafdelingen.
[2] IJzer- en staalindustrie (incl. walserijen enz.).

Source : EUROSTAT

O P I N I O N
of the
Economic and Social Committee
on
OCCUPATIONAL CANCER

Preamble

Occupational cancer is recognized as a serious problem in the protection of workers. The need for prevention and control has been emphasized by international and national actions and proposals, and by less formal but nevertheless valuable consultations, publications and measures, both industrial and scientific. The Committee has sought to avoid repetition of both work already done in relation to definitions and in identification of already recognized carcinogenic risks in occupation, and has recognized the value of drafting proposals in accord with other obligations within the Community actions and within international agreements.

The point of departure for the Committee is the view that efficient prevention of carcinogenic risks at the workplace is possible by protection of workers (i.e. industrial, agricultural and self-employed, etc.) against exposure.

The Opinion, noting that some Community instruments already play a role in the control of some carcinogens, is concerned with an overall strategic approach to the prevention and control of occupational cancer rather than new detailed measures; this implies that steps to implement the general principles will be required in the Community by the preparation of a Directive under the Framework Directive, and by the adoption of appropriate actions for its fulfilment in Member States of the Community.

1. General Elements; the Scope of the Opinion

The Committee having considered definitions already prepared by bodies referred to in the Preamble of the Report has adopted the following definition :

> *Occupational cancer means malignant neoplasms induced in workers as a result of exposure to a carcinogenic substance or agent in their work.*

Carcinogenic substances and agents encompass not only chemical materials and physical agents specifically required by the work process, but also exposure consequent to the work activity. Cancer may arise from physical, chemical and viral activity; in occupational cancer, attribution so far has been confined to the first two of these three but in certain occupations carcinogenic viruses are encountered and therefore must be included in the scope of this document.

The Committee considered a view that occupational carcinogens are not different in essence from other occupational hazards, but takes the approach that occupational carcinogens pose a hazard with the following characteristics which, in combination, make it qualitatively different :

a) there is no proof of the existence of a safe level of exposure;

b) there is usually a long latency between exposure and the appearance and diagnosis of the disease, and by that time the disease may be irreversible;

c) the disease is difficult to predict and is often fatal. However, there are also forms which can be treated successfully. Screening procedures are only applicable to certain forms of cancer and diagnosis and treatment have variable success;

d) making predictions about the susceptibility of individuals to the risk and effect of occupational cancer is not feasible.

These factors emphasize the need for effective identification of carcinogenic substances and agents in the work environment, and for adequate preventive and control measures. They also make it essential to have full information and training systems. The following points of the Committee Opinion address these aspects in more detail. The measures discussed below should apply to carcinogenic agents/processes and the persons exposed or liable to be exposed to them.

2. Classification of Carcinogenic Agents

The problem of classification is a difficult one in the light of recommendations proposed elsewhere. The idea of ranking into categories of descending carcinogenic potency and of application to collections of agents — tabulated according to specific measures such as prohibition, licensing, restriction, control, labelling, and so on — appears attractive on grounds of simplicity and of the ease of rule-making. However, there are great problems arising in classification of carcinogenic agents in this field.

The question of prohibition is discussed below. The Committee recommends that all available information is collected and assessed when identifying substances, agents and processes as carcinogenic hazard indicators. The social imperative to prevent workers from being exposed to carcinogenic agents (and thus, as the safest solution, to ban the use of them) has to be confronted with the technical-economic need to use them nevertheless, under certain conditions.

Hazard identification and risk assessment are two fields where the Committee refrains from giving specific opinions, there being considerable technical information already available. It notes that the results of work of specialized agencies make it possible to list agents/processes, the carcinogenic potential of which is proven, probable or questionable.

Concrete steps in the direction of risk limitation should be guided by the results of research and expert judgement. The Committee urges drawing up a risk limitation plan in which priority is given to the development of measures regarding agents/processes with a proven high carcinogenic potency. Elements for such a plan are listed below.

3. Risk Limitation

Developing risk limitation measures should be a joint effort of governments, employers, and workers and their representatives. For employers and workers there is an important role in prevention, which should be backed up by appropriate legislation in certain areas. The competent authorities should be adequately informed of the preventive measures developed jointly by employers and workers and their representatives.

If an agent/process is proved to be highly carcinogenic, exposure should be proscribed; in cases where exposure cannot be avoided its use should be banned. Which, or whether both, measures should be taken shall be determined case by case. Exemptions should be possible, if accompanied by strict safeguards, in cases where the use can be justified (e.g. for medical research). The use of carcinogens should always be scrupulously justified. If use cannot be justified, it should be banned.

The principles laid down in this Opinion need particular consideration in the case of new substances. These principles should be extended in such cases to a special evaluation of the carcinogenic potential and the degree of hazard in the proposed circumstances of use. After an evaluation, which should employ the full scientific and technological potential available, the measures developed in the two preceding paragraphs should apply. Also, procedures developed on page 32 (2nd paragraph) have special importance in this connection.

If safer substitutes are available, they should be used. Research for safer substitutes and information on their availability should be intensified and improved. The Member States which have not yet ratified ILO Convention 139 on "Prevention and Control of Occupational Hazards caused by Carcinogenic Substances and Agents" should do so.

Another contribution to risk prevention can be made by the setting of limit values for exposure and gradually tightening them up. Nevertheless, it should be made explicit that, with a view to prevention, the only known safe level to offer a zero risk is zero exposure.

Factors deserving special attention in this respect are :

— the development of measuring methods for the working environment and for health surveillance; improvement of sensitivity and specificity of tests forms part of this development;

— monitoring per worker, workplace and work area;

— measurement with a periodicity defined according to the characteristics of the production process, preferably at least every three months, or less frequently as a result of consultations between employers and workers and their representatives if concentration levels are so reduced as to legitimize the assumption that the risk for those exposed is significantly limited;

— consultation of workers and their representatives on measurements and their results;

— right of workers and their representatives to request measurements; and finally,

— provision of information on the contents of existing relevant national legislation.

An important field for developing risk limitation measures is that of technical measures.

In this connection, first, measures should be taken regarding transport of carcinogenic agents (e.g. in closed containers or in appropriate form).

Secondly, attention should be paid to "intra-system" technical measures which influence process factors, e.g. activities at the workplace such as:

— the reduction of concentration of carcinogens, respectively the degree of exposure;

— prevention of emission, e.g. by the use of closed systems;

— reduction of temperature and of pressure;

— change of the layout of the workplace and work area;

— change of process parameters, e.g. by the use of catalysts;

— change from batch to continuous processes;

— filtering in the case of recirculation of air.

Thirdly, options regarding "extra-system" technical measures should be elaborated, (e.g. disposal of emissions by means of aspirators or ventilation; prevention of exposure by the use of protective devices).

Fourthly, the reduction of individual risk to workers in each of these stages has to be considered. Preventive measures should concern :

— reduction of duration and intensity of work during exposure;

— reduction of the number of workers exposed (not so as to increase the individual risk of those exposed);

— use of protective equipment (respiratory devices, clothing, etc.);

— workers exposed to carcinogenic agents/processes should be subject to regular medical and biological surveillance.

With regard to prevention, it should be noted that there is a need to identify whether there are greater risk groups. An expert group should study this in order to determine whether extra measures will be necessary. The Committee also recognized problems which may arise in this connection, e.g. with a view to existing regulations for equal treatment and equal opportunity for men and women.

4. Consultation, Information Collection and Dissemination

One of the greatest impediments to prevention is the lack of knowledge of the carcinogenic potential of agents/processes at the workplace, of the dangers involved, and of the possibilities of effective prevention and their application among employers and workers. A further difficulty is that the effects of carcinogenic substances tend to manifest themselves years after exposure. This might lead to failure to adopt preventive measures, because acute effects cannot be seen.

A system is urgently needed which would permit a better flow of relevant information to those responsible for protective measures at the workplace, and through them to workers and their representatives. Similar information should be made available to other relevant groups, such as occupational physicians, environmental hygienists and those responsible for research to fill lacunae in knowledge. It is desirable to link up certain risk prevention measures with the creation of conditions for a better flow of information (establishment of data banks, registration, see Chapter 5 below).

Regular consultations and cooperation between employers and workers can and must fulfil an important role as a means of planning risk limitation and operating rules.

A condition for effective consultation is that of adequate information both to employers and workers.

As far as employers, workers and the self-employed are concerned it should be stressed that many of the measures recommended in the preceding chapter on risk limitation could and should be used as vehicles for better information.

Workers should receive full information in order to be able really to cooperate in risk prevention. On the other hand, attention has been paid to problems of business confidentiality and to the desirability of giving the appropriate information to the appropriate people: workers may need different information from that needed by occupational physicians.

Improvement with regard to information to workers could be developed in the form in which it is being provided. It should be given orally as well as visually and in writing, be comprehensible, disseminated regularly (e.g. once a year), in the mother tongue of the workers and specific to their job.

Information should, as far as substance is concerned, deal with risks and effects of working with carcinogens, the concentration of carcinogenic agents to be expected during activities at the workplace, and preventive measures to be taken. The latter element should, in particular, take the form of detailed working rules and training, concerning both work under "normal circumstances" (personal hygiene measures, cleaning, disposal of waste) and under "abnormal circumstances" or including emergencies. It should cover activities such as repair and maintenance, and finally labelling. Labels should inform those at the workplace of the name of the substance they have to work with, the carcinogenic properties and potency, the concentration of agents in them, the preventive measures to be taken, and the possible effects. This kind of workplace-oriented labelling will be a necessary complement to existing Community legislation concerning labelling of dangerous substances.

The measures mentioned should not only apply to industrial workers, but also to agricultural workers, or other workers and the self-employed who are exposed to carcinogenic agents/processes at the workplace.

Existing lists of occupations involving carcinogenic risks, drawn up by specialized international agencies, should be constantly updated.

Special attention should be paid to effective dissemination of information to, and consultation in, medium-sized and small enterprises.

5. Registration of Medical Data

An energetic effort should be made to improve registration of the results of medical and biological examination of workers exposed to carcinogens, with a view to creating better conditions for medical and epidemiological research. The same holds for the setting-up of death registers including information on the cause of death and previous occupational activities of the deceased; and also for the provision of cancer register information combined with occupation data, and any other relevant data collection. Better access and use of existing data should be secured. Development of an effective record linkage scheme connecting these areas should be given priority. Great importance should also be attached in this connection to an updated job classification scheme.

As regards the possible conflict between scientific and ethical values in these registration improvements, it should be possible to draw up a system of registration which can respect the confidentiality of personal data. For instance, statistics containing personal data could be "cleaned" by persons who, with a view to their professional ethics, can be expected and trusted to guarantee this confidentiality.

Apart from ethical questions, registration of cases of (occupational) cancer raises several technical problems which should be taken into account. Some are linked with the long latent period of the disease. Others have to do with the mobility of workers exposed to carcinogenic agents/processes across boundaries, and the change of jobs. For the sake of completeness of data, tracing of workers previously exposed might be needed after cessation of employment.

Registration of occupational cancers should not be restricted to mortal cancers, but also include occupational cancers which may be treated successfully.

The registers as meant above should be kept for a minimum length of time of 40 years, as from the date of cessation of exposure to carcinogenic agents/processes at the workplace.

6. Action by the European Community

The special nature of carcinogenic agents/processes and the special character of the risks they imply justify the preparation of a special directive under the framework directive, dealing notably with the use of carcinogens at the workplace, under which each relevant substance could be treated individually.

Furthermore, the European Community should draw the attention of those Member States which have not yet ratified existing relevant international instruments to the desirability of doing so.

Research in fields relevant to the prevention of occupational cancer should actively be taken up and coordinated by the European Community, and should be listed as a priority in the EC's Action Programme.

REPORT
of the
Section for Social Questions
on
OCCUPATIONAL CANCER

Preamble

Occupational cancer is recognized as a serious problem in the protection of workers. The need for prevention and control has been emphasized by international and national actions and proposals, and by less formal but nevertheless valuable consultations, publications and measures both industrial and scientific. The Section has thus been able to draw on documents and instruments prepared by bodies such as the World Health Organization and the International Labour Office and the Directorate-General for Social Affairs of the European Communities and by industrial bodies such as industrial associations and by scientific bodies in the field of cancer research and prevention. In particular the Section has sought to avoid repetition of both work already done in relation to definitions and in identification of already recognized carcinogenic risks in occupation, and has recognized the value of drafting proposals in accord with other obligations within the Community actions and within international agreements.

The point of departure for the Section is the view that efficient prevention of carcinogenic risks at the workplace is possible by protection of workers (i.e. industrial, agricultural and self-employed, etc.) against exposure.

The Report, noting that some Community instruments already play a role in the control of some carcinogens, is concerned with an overall strategic approach to the prevention and control of occupational cancer rather than new detailed measures; this implies that steps to implement the general principles will be required in the Community by the preparation of a Directive under the Framework Directive, and by the adoption of appropriate actions for its fulfilment in Member States of the Community.

The Report is divided into sections dealing with general elements and the scope of the Report, definitions and classifications, preventive measures, consultation and information collection and dissemination, and medical and epidemiological supplementary measures. Lastly, there is a proposal for action by the European Community.

1. General Elements; the Scope of the Report

The Section having considered definitions already prepared by bodies referred to in the Preamble, has adopted the following definition:

> *Occupational cancer means malignant neoplasms induced in workers as a result of exposure to a carcinogenic substance or agent in their work.*

Carcinogenic substances and agents encompass not only chemical materials and physical agents specifically required by the work process, but also exposure consequent to the work activity. Cancer may arise from physical, chemical and viral activity; in occupational cancer, attribution so far has been confined to the first two of these three but in certain occupations carcinogenic viruses are encountered and therefore must be included in the scope of this document.

The Section considered a view that occupational carcinogens are not different in essence from other occupational harzards but take the approach that occupational carcinogens pose a hazard which has the following characteristics which, in combination, make it qualitatively different:

a) there is no proof of the existence of a safe level of exposure;

b) there is usually a long latency between exposure and the appearance and diagnosis of the disease, and that by that time the disease may be irreversible;

c) the disease is difficult to predict and is often fatal. However, there are also forms which can be treated successfully though screening procedures are only applicable to certain forms of cancer and diagnosis and treatment have variable success;

d) making predictions about the susceptibility of individuals to the risk and effect of occupational cancer is not feasible.

These factors emphasize the need for effective identification of carcinogenic substances and agents in the work environment, and for adequate preventive and control measures. They also make it essential to have full information and training systems. The following sections of the Section Report address these aspects in more detail. The measures discussed below should apply to carcinogenic agents/processes and the persons exposed or liable to be exposed to them.

2. Classification of Carcinogenic Agents

The Section considered the difficult problem of classification in the light of recommendations proposed elsewhere. The idea of ranking into categories of descending carcinogenic potency and of application to collections of agents, — tabulated according to specific measures such as prohibition, licensing, restriction, control, labelling, and so on — appears attractive on the grounds of simplicity and the ease of rule-making. However, the Section recognized the problems arising in classification of carcinogenic agents in this field. In particular, it reviewed the difficulty of evaluations of the hazards arising from, (a) mixtures, (b) carcinogenic contaminants in low proportion in non-carcinogenic chemicals, and (c) work questions where carcinogens are present in totally closed systems. On the other hand, it recognized that there are working situations where carcinogenic agents can be identified and exposure measured, and where some or much information is available on dose-response.

The question of prohibition is discussed below. The Section recommends that all available information is collected and assessed when identifying substances, agents and processes as carcinogenic hazard indicators. The social imperative to prevent workers from being exposed to carcinogenic agents (and thus, as the safest solution, to ban the use of them) has to be confronted with the economic need to use them nevertheless, under certain conditions. They further recommend that a risk assessment should then follow and the appropriate measures in the following chapters applied.

The Section feels that hazard identification and risk assessment are two fields where it should refrain from giving specific opinions, there being considerable technical information already available. It has taken note of the results of the work done by specialised international bodies such as the IARC, the WHO and the ILO. Obviously, knowledge of this material is indispensable for each and everyone who wants to take action in the field of risk prevention.

On the basis of this material it is possible to list agents/processes the carcinogenic potential of which is proven, probable or questionable.

The Section thinks that concrete steps in the direction of risk limitation should be guided by these results of research and expert judgement. The Section urges the drawing-up of a risk limitation plan in which priority is given to the development of measures regarding agents/processes with a proven high carcinogenic potency. Elements for such a plan are listed below.

3. Risk Limitation

It is in the field of risk limitation consequent on hazard identification and risk assessment that the Section sees a role for the Committee. In developing proposals for risk limitation, several factors should be paid due attention, in addition to those identified by research and expert judgement. The question of social and economic factors and technological feasibility of risk limitation was raised in the Section.

The Section thinks that a leading principle in developing risk limitations measures is that of a joint effort of governments, employers, and workers and their representatives. For employers and workers there is an important role in prevention, which should be backed up by appropriate legislation in certain areas. The competent authorities should be adequately informed of the preventive measures developed jointly by employers and workers and their representatives.

If an agent/process proved to be highly carcinogenic, exposure should be prescribed; in cases where exposure cannot be avoided its use should be banned. Which, or whether both, measures should be taken shall be determined case by case. Exemptions should be possible, if accompanied by strict safeguards, in case the use can be justified (e.g. for medical research). The Section feels that the use of carcinogens should always be scrupulously justified. If use cannot be justified, it should be banned.

The principles laid down in this Report need particular consideration in the case of new substances. These principles should be extended in such cases to a special evaluation of the carcinogenic potential and the degree of hazard in the proposed circumstances of use. After an evaluation, which should employ the full scientific and technological potential available, the measures developed in the two preceding paragraphs should apply. Also, procedures developed in the third paragraph of chapter 4 have special importance in this connection.

If safer substitutes are available, they should be used. Some members in the Section underlined that several factors should be taken into account, such as costs, and the question whether or not the substitute has all the relevant properties of the agent/process to be replaced. Research for safer substitutes and information on their availability should be intensified and improved. The Member States which have not yet ratified ILO Convention 139 on "Prevention and Control of Occupational Hazards caused by Carcinogenic Substances and Agents" should do so.

Another contribution to risk prevention can be made by the setting of limit values for exposure and gradually tightening them up. Nevertheless, it should be made explicit that, with a view to prevention, the only known safe level to offer a zero risk is zero exposure.

Factors deserving special attention in this respect are:

— the development of measuring methods for the working environment and for health surveillance; improvement of sensitivity and specificity of tests forms part of this development;
— monitoring per worker, work place and work area;
— measurement with a periodicity defined according to the characteristics of the production process, preferably at least every three months, or less frequently as a result of consultations between employers and workers and their representatives if concentration levels are so reduced as to legitimize the assumption that the risk for those exposed is significantly limited;
— consultation of workers and their representatives on measurements and their results;
— right of workers and their representatives to request measurements, and finally,
— provision of information on the contents of existing relevant national legislation.

An important field for developing risk limitation measures is that of technical measures.

In this connection, the Section proposes first, measures regarding transport of carcinogenic agents (e.g. in closed containers or in appropriate form, i.e. not as powder, gas or liquid, but as a paste or granulated).

Secondly, attention should be paid to "intra-system" technical measures which influence process factors, e.g. activities at the workplace such as :

— the reduction of concentration of carcinogens, respectively the degree of exposure;
— prevention of emission, e.g. by the use of closed systems;
— reduction of temperature and of pressure;
— change of the layout of the workplace and work area;
— change of process parameters, e.g. by the use of catalysts;
— change from batch to continuous processes;
— filtering in the case of recirculation of air.

Thirdly, options regarding "extra-system" technical measures should be elaborated, (e.g. disposal of emissions by means of aspirators or ventilation; prevention of exposure by the use of protective devices).

Fourthly, the reduction of individual risk to workers in each of these stages has to be considered. The Section thinks that preventive measures should be concerned with:

— reduction of duration and intensity of work during exposure;
— reduction of the number of workers exposed (not so as to increase the individual risk of those exposed);
— use of protective equipment (respiratory devices, clothing, etc);

— workers exposed to carcinogenic agents/processes should be subject to regular medical biological surveillance.

With regard to prevention, the Section recognized there would be a need to identify whether there are greater risk groups. An expert group should study this in order to determine whether extra measures will be necessary. The Section also recognized problems which may arise in this connection, e.g. with a view to existing regulations for equal treatment and equal opportunity for men and women.

4. Consultation, Information Collection and Dissemination

One of the greatest impediments for prevention is the lack of knowledge of the carcinogenic potential of agents/processes at the workplace, of the dangers involved, and of the possibilities of effective prevention and their application among employers and workers. A further difficulty is that the effects of carcinogenic substances tend to manifest themselves years after exposure. This might lead to failure to adopt preventive measures, because acute effects cannot be seen.

A system is urgently needed which would permit a better flow of relevant information to those responsible for protective measures at the workplace, and through them to workers and their representatives. Similar information should be made available to other relevant groups, such as occupational physicians, environmental hygienists and those responsible for research to fill lacunae in knowledge. Leaving aside detailed discussion of organisation and coordination of research in hazard identification and risk assessment, the Section thinks it important to underline the desirability of linking up certain risk prevention measures with the creation of conditions for a better flow of information (establishment of data banks, registration, see Chapter 5 below).

Regular consultations and cooperation between employers and workers can and must fulfil an important role as a means of planning risk limitation and operating rules.

A condition for effective consultation is that of adequate information both to employers and workers. In this connection it was agreed that labelling can be an important source of information, flowing from suppliers of carcinogenic agents to those who use them and are exposed to them.

As far as employers, workers and the self-employed are concerned, it should be stressed that many of the measures recommended in the preceding chapter on risk limitation could and should be used as vehicles for better information.

In the Section it has been stressed that workers should receive full information in order to be able really to cooperate in risk prevention. On the other hand, attention has been paid to problems of business confidentiality and to the desirability of giving the appropriate information to the appropriate people: workers may need different information than occupational physicians.

Improvement with regard to information to workers could be developed in the form in which it is being provided. It should be given orally as well as visually and in writing, be comprehensible, disseminated regularly (e.g. once a year), in the mother tongue of the workers and specific to their job.

Information should, as far as substance is concerned, deal with risks and effects of working with carcinogens, the concentration of carcinogenic agents to be expected during activities at the workplace, and preventive measures to be taken. The latter element should, in particular, take the form of detailed working rules and training, concerning both work under "normal circumstances" (personal hygiene measures, cleaning, disposal of waste) and under "abnormal circumstances" or including emergencies. It should cover activities such as repair and maintenance, and finally labelling. Labels should inform those at the workplace of the name of the substance they have to work with, the carcinogenic properties and potency, the concentration of agents in them, the preventive measures to be taken, and of possible effects. This kind of workplace-oriented labelling will be a necessary complement to existing Community legislation concerning labelling of dangerous substances.

The Section notes that the measures mentioned do not apply only to industrial workers, but also to agricultural workers, or other workers and the self-employed who are exposed to carcinogenic agents/processes at the work place.

Existing lists of occupations involving carcinogenic risks drawn up by specialised international agencies should be constantly updated.

Special attention should be paid to effective dissemination of information to, and consultation in, medium-sized and small enterprises.

5. Registration of Medical Data

The Section thinks that an energetic effort should be made to improve registration of the results of medical and biological examination of workers exposed to carcinogens, with a view to creating better conditions for medical and epidemiological research. The same holds for the setting up of death registers including information on the cause of death and previous occupational activities of the deceased; and also for the provision of cancer register information combined with occupation data, and any other relevant data collection. Better access and use of existing data should be secured. Development of an effective record linkage scheme connecting these areas should be given priority. Great importance should also be attached in this connection to an updated job classification scheme.

The Section discussed the possible conflict between scientific and ethical values in these registration improvements. It thinks that it is possible to draw up a system of registration which can respect the confidentiality of personal data. For instance, statistics containing personal data could be "cleaned" by persons who, with a view to their professional ethics, can be expected and trusted to guarantee this confidentiality. Such persons, e.g. occupational physicians, could produce statistics concerning personal exposure, changes in health, cause of mortality, etc., without names but containing all the relevant data.

Apart from ethical questions, registration of cases of (occupational) cancer raises several technical problems which should be taken into account. Some are linked with the long latent period of the disease. Others have to do with the mobility of workers exposed to carcinogenic agents/processes across boundaries, and the change of jobs. For the sake of completeness of data, tracing of workers previously exposed might be needed after cessation of employment.

Registration of occupational cancers should not be restricted to mortal cancers, but also include occupational cancers which may be treated successfully.

In some professions, the setting up of occupational records might be easier than in others. The feasibility should be assessed case by case.

The registers as meant above should be kept for a minimum length of time of 40 years, as from the date of cessation of exposure to carcinogenic agents/processes at the workplace.

6. Action by the European Community

The Section thinks that the special nature of carcinogenic agents/processes and the special character of the risks they imply justify the preparation of a special Directive under the framework Directive, dealing notably with the use of carcinogens at the workplace, under which each relevant substance could be treated individually.

Furthermore, the European Community should draw the attention of those Member States which have not yet ratified existing relevant international instruments of the desirability to do so.

Research in fields relevant to the prevention of occupational cancer should actively be taken up and coordinated by the European Community, and should be listed as a priority in the EC's Action Programme.

APPENDIX

Reference documents

— Council Resolution on a Second Programme of Action of the Europen Communities on Safety and Health at Work
(OJ No. C 67 of 8 March 1984)

— Plan for Implementing the Programme of Action of the European Communities on Safety and Health at Work in 1985
(V/LUX/8281/85 of January 1985)

— ILO Convention No. 139 of 24 June 1974 on the Prevention and Control of Occupational Hazards caused by Carcinogenic Substances and Agents

— ILO Recommendation No. 147 of 24 June 1974 on the Prevention and Control of Occupational Hazards caused by Carcinogenic Substances and Agents

Opinions of the ESC on:

— the Second Programme of Action on Safety and Health at Work
(OJ No. C 176 of 4 July 1983)

— the Proposal for a Council Directive on the Protection of Workers from Harmful Exposure to Chemical, Physical and Biological Agents at Work
(OJ No. C 297 of 28 November 1979)

ESC Study on:

— the Health and Environmental Hazards arising from the Use of Asbestos
(CES 230/79 of 22 February 1979)

Opinions of the ESC on:

— the Proposal for a Second Council Directive on the Protection of Workers from the Risks related to Exposure to Agents at Work: Asbestos
(OJ No. C 310 of 30 November 1981)

— the Proposal for a Council Directive on the Approximation of Member States' Laws, Regulations and Administrative Provisions on the Protection of the Health of Workers Occupationally Exposed to Vinyl Chloride Monomer
(OJ No. C 287 of 30 November 1977)

— Occupational Medicine
(OJ No. C 307 of 19 November 1984)

— the Proposal for a Council Directive amending for the sixth time the Council Directive of 27 June 1967 on the Approximation of the Laws of the Member States relating to the Classification, Packaging and Labelling of Dangerous Substances.
(OJ No. C 114 of 11 May 1977)

ECONOMIC AND SOCIAL COMMITTEE
Press, Information and Publications Division

Rue Ravenstein, 2 Tel. 519 90 11 Telegrams ECOSEUR
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