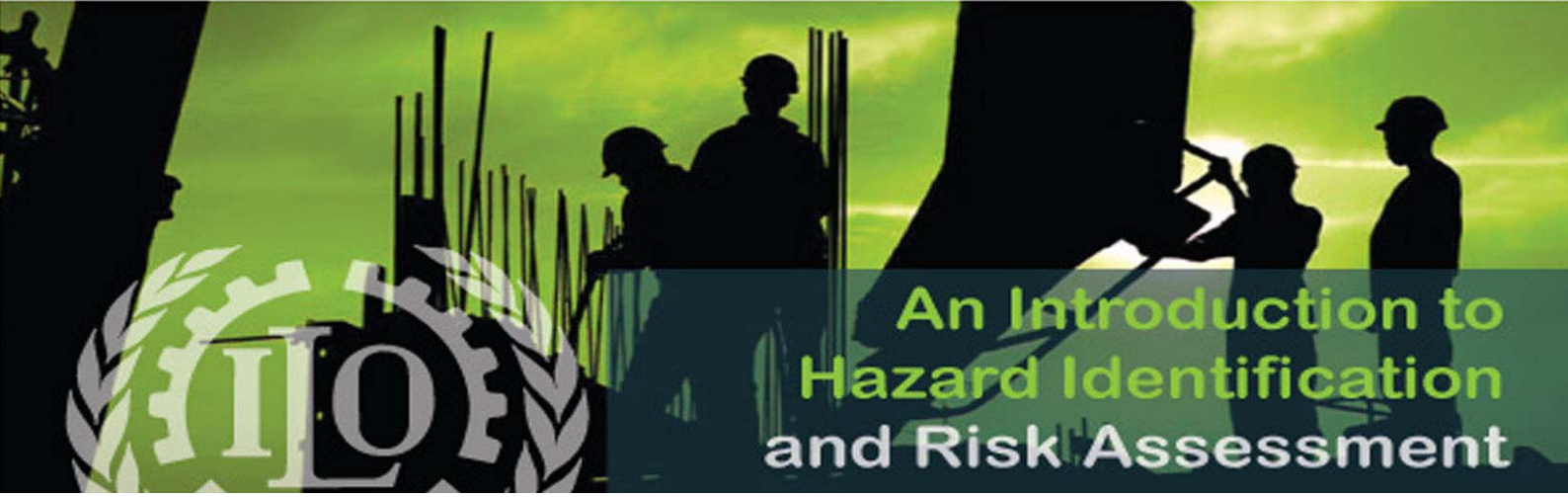


OSH Brief No. 2

Introduction

"Some hazards are obvious to any observer looking for them - badly stacked pallets, oil on the floor, trailing wires in the office, and so on. But many work hazards are not at all obvious, and safety representatives cannot rely on casual visual inspection to show whether or not their workplace is safe and healthy. In some cases people get so used to their workplaces that they develop 'blind spots' to potential dangers. In other instances, hazards may be hard to spot because they do not have immediate effects (e.g. noise and some poisons). Some hazards only become apparent when special operations (e.g. maintenance and cleaning) are being carried out. Even when an accident has happened, observers may be looking so hard at what the victim was 'doing wrong' that they fail to spot defects in the system of work itself." *British TUC, The Safety Representative*

One of the most difficult problems for any safety representative is identifying safety and health hazards at work. Basically, how do you know if a chemical in your workplace is toxic, a noise too loud or a process dangerous? Sometimes, a safety representative, whether it be a workers' representative or a supervisor or manager, may have a "feeling" that something is wrong, but lack the confidence or knowledge to take up the issue. Often it is felt that occupational safety and health is best left to specialists or experts. This is far from the truth.

The first point is that you do not have to be an expert with sophisticated monitoring equipment to start identifying problems in your workplace. Your body is the greatest barometer for detecting and recognizing hazards in the workplace. Itching skin, headaches, runny eyes and throat irritation can all be manifestations of a workplace hazard where they persist or are spread across a wide cross-section of the staff. It is at this stage you may have to get management to call for technical advice or specialized information as, for example, from the factory inspectorate. However, much can be achieved by way of rectifying the problem before it even reaches that stage. What is required is a combination of an understanding of the work process and its possible hazards; obtaining information from sources such as safety data sheets (previously known as material safety data sheets), and established hazard data with respect to the process; common sense; and a logical, systematic approach to identify each safety and health problem.

Identifying safety and health problems

Here are some of the possible methods of identifying safety and health problems:

- observing your workplace:
  - *Look at the overall objective of a job/s and how it is being carried out.*
  - *How is the job organized?*
  - *Is it a top-down approach looking at all of the subtasks to be carried out to achieve the main objective?*
  - *Does a breakdown of tasks help to identify control measures?*
  - *Watch the task being executed to ensure that the correct procedures are being adhered to and that nothing being done has the potential to cause injury.*
- registering complaints from workers;
- examining accident and 'near-miss' records;
- examining sickness figures;
- asking workers and supervisors what they think by using simple surveys;
- conducting inspections (general or specialized);

- using checklists;
- reading any reports, information, etc. about your workplace. For example, you may look at any of the following:
    - Manufacturer/Industry-specific instructions/specifications:
        These are terms and conditions under which the equipment, substance or activity needs to be carried out to avoid injury or illness.
    - Standards:
        Are there any conditions which have been established by research institutions which indicate the safe working or operating levels of a particular process or substance?
        Bodies such as the *International Organization for Standardization (*ISO*), Occupational Health and Safety Advisory Services (OHSAS) , American Conference of Governmental Industrial Hygienists (ACGIH), National Institute of Occupational Safety and Health (NIOSH), Health and Safety Executive (HSE), and the International Labour Organization, are standard-setting organizations.*
    - Changes in legislation.

Let us look at these in more detail because they are the basic tools with which a safety representative or member of a safety committee can start to identify safety and health problems at work. These techniques require no specialized knowledge, just enthusiasm and an inquiring mind.

Observing your workplace

You may have already used your powers of observation to spot some of the typical hazards faced by workers, but observation is not the only tool that can be used. Use your nose and your ears as well. Believe it or not, your body's senses are far more sensitive to hazards than the most sophisticated monitoring equipment. If a new chemical makes your eyes water or you start to cough, your body is telling you to beware. But be careful, after a few weeks your eyes may no longer water or you may stop coughing. Does it mean that the chemical is now safe? Of course not, it means that your body's sensitivity to the hazard is being destroyed. Always note the reactions of new workers or visitors to the plant - it can be most informative – see how they react to the working environment.

Registering complaints from workers

When it comes to his or her own safety and health, a worker may complain because he or she is worried. If workers start complaining about "feeling sick", "getting headaches", or "my back hurts all the time", there is usually a reason. No one likes to feel ill. The

Listening to complaints

complaints should not be trivialized since these complaints might be warning signs of a bigger problem in the making. The fact that each individual's metabolism is different would suggest the reaction time of each individual to a particular stimulus will be equally staggered as the substance or process takes effect on the immune or musculo-skeletal system.

A safety representative or member of a safety committee may have to decide on the merit of the complaint, but the representative must be careful not to take on the role of a doctor and decide that the complaint is not valid, or trivial. Many occupational diseases start off with such minor signs and symptoms.

Examining accident and 'near-miss' records

You may feel that you are entering the province of the doctor or nurse and that this is best left to the specialists. Your workplace may not keep such records and, if they do, they are generally confidential. However, most companies do keep some form of an accident book not only for their own records but so that the figures can be presented to the Ministry of Labour as is required under most of the existing legislation in the region.

Examine Records

Accidents are a clear indication that there has been a failure in the system. By examining these accident reports you are able to determine the type of failure and the nature and severity of the resulting injury. The figures tell you far more than simply how many workers were injured and how many days off work they had. They tell you where the problems may lie, in which part of the workplace, with which machines or what process. They identify trends and patterns which allow the appropriate control measures to be designed and implemented. All too often it is the new inexperienced worker who gets injured because he does not have the knowledge or training to avoid getting injured.

simple saying: "Near-misses are warnings". Next time it may not be a 'near-miss', you may be injured.

If your company does not keep any sort of accident register or 'near-miss' book, why not? It may not be required under the law, but it is necessary to keep track of potential areas of concern. If the company is not keeping a 'near miss' log, it may be necessary for a safety representative or the safety committee to start their own basic 'near miss' register. It should not be too complicated but contain basic information for use in later consultation with management over safety and health issues.

Though the collection and collation of such information is part of management's responsibilities, it would be true to say that many employers in the region do not keep such records and, if they do, the information may not be readily available.

Some possible headings for an accident register or 'near-miss' book

Name	Personnel No.	Type of work	Type of Accident/Near-miss	Place	Time and Date	Time off	Action taken
J. Bond	007	Special agent	Fall - slippery floor	Machine shop	9.45 a.m. 4.4.2011	1 week	Oil spillage cleaned on floor

The safety and health committee should view such statistics in terms of possible priorities. The improved legislation in the region gives the worker representatives and members of the safety committee access to this information.

It is not only accidents that need to be investigated; so-called "near – misses" need to be investigated as well. Research has suggested that for approximately every ten 'near miss' events at a particular location in the workplace, a minor accident will occur. A 'near-miss' refers to any incident that could have resulted in an accident. Everyone has had a 'near-miss' whether it is on the road or in the workplace. There is a very

Examining sickness figures

Again, this may prove extremely difficult because of confidentiality, availability of figures, etc., but sickness can provide valuable information. In your workplace you may perhaps find that two or three workers were absent more often than the rest of the workforce. Management might suggest that they are "lazy" or "weak" and not suited to the job in question. However, it could mean that they are all working in adverse conditions that are making them ill. Again, it may be necessary to start keeping and reviewing such records.

Using simple surveys

One of the best ways to identify occupational safety and health problems is to ask the workers themselves what they think. After all, workers have the best idea of how the work is done, what changes have been

Ask workers what they think

made over recent years and how conditions in the workplace affect them. Workers are familiar with the daily process of production and any problems involved. This approach is important because it stimulates staff members' awareness and involvement, and company loyalty. Of course, the kind of approach used for workers is all-important - they are not on trial and should not be made to feel threatened or intimidated in any way. All you are trying to find out are their thoughts and any suggestions they may have. However tactful a safety representative or member of a safety committee may be, there will always be some workers who do not want to co-operate. The safety representative should not become despondent and feel isolated, but understand that because of the culture of the organization, many workers may be afraid of any consequences that may result from participating in any such survey.

Let us look, for example, at conducting a simple survey for a chemical hazard. The effects of chemicals at work may be hard to trace in this way - it may not occur to workers that headaches, dizziness or skin rashes are linked to substances they work with. Many long-term chronic effects - loss of breath and tiredness - may simply be attributed to "growing older". Alternatively, symptoms may not appear clearly until permanent damage has been done.

It can be very difficult to get any firm conclusions from one or two individual cases. Often you will need to look at the entire workforce or a sample of the workforce, depending on its size, to see if a collection of minor symptoms might add up to something more suspicious. This can be done by carrying out simple short surveys of the workforce. The kind of survey questions used will depend on the hazard. You should keep questions short and simple.

The most that such a safety and health survey would normally show is that a case exists for more detailed inquiries into the suspected substances. If possible, it is always worthwhile comparing and contrasting the results of such a survey for different groups of workers, e.g. office workers, production workers, and so on.

Conducting inspections (general or specialized)

There are basically three different types of inspection you can undertake in your workplace, namely:

- **General inspections**. Using a checklist, such as the COSHE checklist on the webpage, allows for a thorough look at all aspects of the workplace and the working environment.

Inspect

- **Special inspections**. These concentrate on a particular hazard, work area or system of work. You might feel that it is necessary to examine noise problems in detail, for example, or the use of a particular new chemical about which you are concerned.
- **Accident inspections**. These are inspections of particular accidents (or dangerous incidents), and usually part of the accident investigation. Some unions may already be involved in this type of inspection because of their work in compensation cases. These inspections are aimed at finding the real causes of an accident so that further accidents can be prevented.

Using checklists

There are a number of ways to help you to assess any safety and health hazards in your workplace, including the use of **checklists.** Basically you want to know the following:

- How safe is your workplace?
- What are the major safety and health problems?
- What are the priorities?
- How can the hazards be controlled?
- What are the cost implications?
- What does the law require?
- How can the workers be involved?
- How can a safety and health policy be developed and implemented for the benefit of management and workers?

As a start, you have to look closely at your own workplace and construct a picture of any potential hazards and risks. You can develop risk maps or plans for each section/floor of your workplace that are put on file for future reference. Any changes (such as new machine guards on the machines or the use of safer chemicals) must be recorded. In other words you are building up a diagrammatic overview of the state of OSH in your factory.

The information shown on a risk map should include:

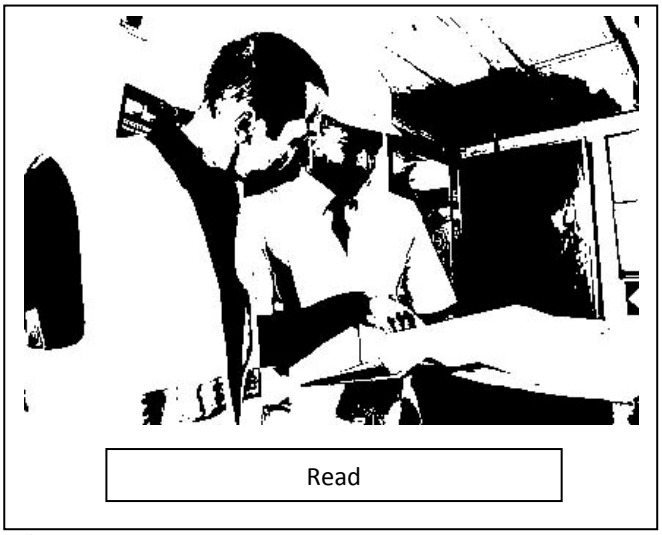
- the type of process;
- the location of machinery, equipment, storage areas, exits, firefighting equipment, first-aid kits, infirmary, rest rooms etc.; and
- potential hazards (chemical, physical etc.).

The process is quite simple. All you have to do is draw a floor plan of the workplace or the component sections/floors, marking as accurately as possible, the main features of the workplace – doors, windows, stairs, gangways etc. Once you have your floor plan mark all potential hazards/risks – construct a picture of the state of safety and health in your factory. You can also put down the normal location of key personnel such as first-aiders, members of any firefighting team, or safety and health representatives if you have a joint OSH committee.

You are not expected to become a safety and health expert overnight – you may be the general manager or a workers' representative and have limited time to think about safety and health in your factory. The usual approach is for someone to do a quick, occasional "walk through" inspection and then report back. This is not however, the best way to approach the question of health and safety in your factory. By undertaking this ad-hoc, haphazard approach, you may miss things that could be vital. You need to look carefully, in a planned, logical way, at each part of the production process and at each worker's job. This may be time consuming at the beginning but will pay dividends in the end. The task becomes a great deal easier if you have the full co-operation of the workforce and there is a viable joint worker/management safety and health committee at the factory. The task is also made easier by the use of checklists that help you to not miss anything.

Reading any reports and getting information about your workplace

Sometimes it is very difficult to get any information on the hazards you face in your workplace. Often the



information is not readily available and, although it is primarily management's responsibility to obtain such information, it may fall on your shoulders to try and find out as much as you can. Access to reliable sources is vital for the success of a safety representative or member of a safety committee.

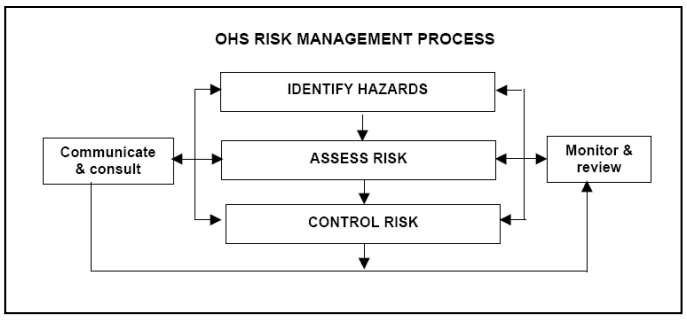
It is encouraging to note that access to information is usually covered under some of the recent legislation in the region. For example, some legislation may indicate that "the workers' representative shall be granted access to information relating to all workplace hazards and to all reports relating to the workplace environment. "

The risk assessment process

Risk management involves all stakeholders looking at the risks that arise in the workplace and then putting in the most appropriate safety and health measures in place to control them. By doing this, workers as well as members of the public are protected from harm. By assessing what you are already doing, think about what controls you have in place and how the work is organized. Then compare this with the good practice and see if there is more that can be done to bring in line with the required standard. From a safety and health standpoint, decide on priorities and what controls would be most appropriate. It is important to consider:

- Can I get rid of the hazard altogether (so-called *elimination*)?
- If not, how can I control the risks so that harm is unlikely?

It must be stressed however, that not all hazards present a risk, or the level of the risk may be low because of the control measures being put in place. The determination of the significance of the hazard and the accompanying risk is quantified by conducting a **risk assessment.**



- **Hazards identification**
  - This requires the breaking down of the job into its various tasks or components.
  - Identify the hazards at each stage of the process.
- **Decide who might be harmed and how**
  - Identify the persons who are at risk of injury or illness as a result of the activity.
  - Determine how that injury or illness will occur.
- **Evaluate the risk level and decide whether existing precautions are adequate or more should be done**
  - An analysis or measurement is carried out to quantify or determine the likelihood of an injury occurring given the existing precautions/controls.
- **Risk controls (existing and additional)**
  When controlling risks, apply the principles below, if possible in the following order of priority:

  - try a less risky option (eg switch to using a less hazardous chemical. However this is not always possible as so-called “safe substitutes” must exhibit similar properties to the original, and this could also include their hazardous nature);
  - prevent access to the hazard (eg by guarding);
  - organize work to reduce exposure to the hazard (eg put barriers between pedestrians and traffic or introduce work patterns/shifts to minimize any possible exposure);
  - issue the requisite personal protective equipment (PPE) (eg clothing, footwear, goggles etc of the highest quality) and ensure that workers are fully trained in its use, maintenance and upkeep; and
  - provide welfare facilities (eg first aid and washing facilities for removal of any possible contamination).

It is worth pointing out that improving safety and health at the workplace need not cost a great deal of money.

- **Record significant findings**
  - This is necessary to make information available for the review of any findings or corrective measures identified in the process.
- **Monitor and review the assessment and revise it if necessary**
  - This is necessary if the systems are to be kept current in light of any new technology and incident information.

Factors affecting risk assessment

- **Hazard effects**
  - What harm does the hazard cause, how likely is it that someone could be harmed and how serious is the injury

or illness (which may be acute or chronic)?
    - Acute effect may result in critical, dangerous symptoms due to short - term exposure and is normally reversible once removed from the environment.
    - Chronic effect occurs as a result of prolonged exposure to chemicals or toxic substances often causing irreversible injury or illness, which may reoccur on contact with the substance or one of its derivatives.

- **Accident/exposure outcomes**
    - What is the adverse health effect as a result of an accident or exposure to a toxic substance e.g. fracture, amputation, and respiratory problems?

- **Persons and numbers exposed**
    - The number of individuals or category of individuals exposed to the hazards e.g. welders and wood workers?

- **Duration of exposure**
    - The length of time the worker comes into contact, and remains in contact, with the hazard.

- **Frequency of exposure**
    - The number of times the worker comes into contact with the hazard during his/her work period.

The above factors determine whether the risk is acceptable, tolerable or unacceptable.

Acceptable risks are those risks which are normally determined by legislation, industry and/or national and international standards. However, there are those risks which parts of society may accept even though standards and information have highlighted that there could be negative health effects associated with them, (e.g. the use of ipods at very high volumes or the loud music at parties are all known to possibly cause hearing loss but individuals continue to indulge as a matter of personal choice).

Tolerable risk is the basic safety objective when carrying out risk control and is defined using the concept of ALARP – as low as is reasonably practicable. ALARP encompasses both the ideas of practicality (can something be done?) as well as the costs and benefits of action/inaction (is it worth doing something?).

Unacceptable risks are those risks which cannot be justified under any circumstances and must be controlled.

POINT TO REMEMBER

Identifying the safety and health problems in the workplace may at first seem complex and beyond the scope of a safety representative or members of a safety committee – this is far from the truth. Using some of the methods outlined above, a safety representative or member of a safety committee can start identifying hazards in the workplace today and begin the process of improving all aspects of the working environment. REMEMBER – Good health, safety and working conditions are an integral component of productivity. There is a direct correlation between decent work, increased productivity and successful business.