

# SEGMENT ELEVEN - Occupational Health

After studying this segment you should have a greater understanding of the ensuring occupational health and how to reduce the exposure to factors that can cause occupational illness.

## AIMS OF THE SEGMENT

The main aim of this segment is to help you to understand the importance of preventing work related ill health and to be able to:

- State the main types of health hazard;
- Give examples of occupational illnesses and diseases;
- Describe a variety of control measures and appreciate the principle of a hierarchy of control.

## PREVENTING WORK RELATED ILL HEALTH

In industry in the UK we generally show more concern or interest in safety issues than in occupational health. The safety dangers to be found in many occupations seem much more real than the longer term health risks to be found in these occupations.

Occupational health is at least as important as safety at work. Many work accidents are relatively minor as for every one serious accident or death there tends to be 10 accidents with less serious results.

Of those who suffer from the 10 less serious accidents many make a complete recovery with no longer term problems.

The result of occupational ill health is very different. Most occupational ill health issues usually end in someone suffering long term discomfort, pain and disability, while some die.

Reported deaths, long term ill health and lost working days have generally improved over the last 15 years, remaining roughly constant from 2011/12.

Even so, it is estimated that more than 25 million working days are lost each year from these illnesses. More than 13,000 deaths are reported each year, usually linked to past exposure at work to chemicals and dusts.

Of the more than 1 million cases of occupational ill health, almost all of these are long term problems which may be with the sufferer for the rest of their lives.

Those are some of the reasons why it is better to prevent work related ill health as it

is often not possible to completely cure it.

## **HEALTH HAZARDS AT WORK**

The various occupational health hazards at work naturally fall into one of five groups.

### **Chemical**

In the seafood industry we have a few chemical hazards, but not as many as some industries.

Ours will include cleaning chemicals, refrigeration chemicals (particularly ammonia), additives and process chemicals (acids used in marinades, dye used to colour smoked fish).

Apart from the need to kill bacteria we tend not to have much use for dangerous chemicals.

Other industries though, might use solvents, heavy metals, asbestos, carcinogens that can cause cancer, etc. This has been covered in detail in the segment on COSSH.

### **Biological**

Again, there are few biological health hazards in the seafood industry, unless of course you are allergic to seafood! Seriously though, some people are so allergic to seafood that simple skin contact can bring them out in a rash.

One well known biological health hazard in the seafood industry is to be found in scampi processing. One way of removing scampi from its shell involves the use of high pressure air to blow it out. This drives small particles of the scampi into the air which can be breathed in. If you breathe in this scampi 'mist' or aerosol for long enough you can become highly sensitive and quite ill for a long time.

Other biological hazards can lead to occupational disease. Exposure to viruses, bacteria and parasites can lead to disease. If the exposure is increased because of a particular occupation then the disease is an occupational one.

### **Physical**

Long term exposure to cold and damp conditions can produce a wide range of ill health effects and the seafood industry has had its share of these. Other physical hazards include excessive noise and vibration. Many fish processing factories are very noisy work environments. The use of ear defenders and ear plugs will protect you from the noise, provided you wear them. Some employers insist on their employees having regular hearing tests to detect the earliest signs of hearing loss.

### **Psychological**

Becoming increasingly significant, the most common effect of a psychological health hazard is stress. Stress now accounts for more ill health and lost working time than ever before and in part at least it is the result of greater pressure at work.

### **Ergonomic**

Ergonomics is the science behind the design of the things we use. Ergonomic design helps to make equipment easier to use, work stations easier to work from, even chairs more comfortable in which to sit.

Ergonomics is also responsible for the design of your work patterns, or at least it should be.

Poorly positioned equipment requiring awkward handling and movements leading to tiredness, muscle strain and stress are examples of poor ergonomics.

Jobs that require someone to carry out highly repetitive tasks for long hours resulting in undue stresses and strains on the mind and body are examples of poor ergonomics.

Working on things that are too high or too low, too heavy, hot or cold are examples of poor ergonomics.

Good ergonomics means using well designed equipment at work stations that are adapted for your height, with opportunities to switch jobs before you become tired.

## **RISK ASSESSMENT AND OCCUPATIONAL HEALTH**

As an employer you should carry out an assessment of the risks in the workplace that could result in occupational ill health.

There are generally accepted to be four stages in this.

**Recognition** that a hazard exists and identification of the cause.

**Measurement** to quantify the level of exposure to the hazard.

**Evaluation** of the extent of the risk of ill health.

**Control** of the hazard.

## **RECOGNITION**

There are a number of ways of investigating the possible presence of an occupational health hazard.

- **Workplace Search & Surveys** – to identify known hazardous substances and activities.
- **Look at records** of purchases and the material data sheets they come with.
- Guidance and information from the **HSE**.
- Examination of ill-health and absence **records**.
- **Discussions** with staff and health experts.



Recognition of the presence of a potential hazard to health in the workplace leads us on to stage two, measurement.

## MEASUREMENT

If a hazard is identified then the scale of the problem needs to be measured. This may well be the point at which an occupational health expert is required.

It will be necessary to measure the **amount** of substance present.

It will be necessary to measure the **length of exposure** of individual members of staff.

The **numbers and types** of persons exposed need to be worked out.

If the exposure is a routine part of work or only during a particular operation or only during an emergency then the control measures will be quite different for each.



## EVALUATION

Evaluation of the scale of the hazard depends upon the nature of the substance or activity, the amount and length of exposure, the nature of the persons exposed.

Hazards may be chemical, biological, physical, ergonomic and psychological.

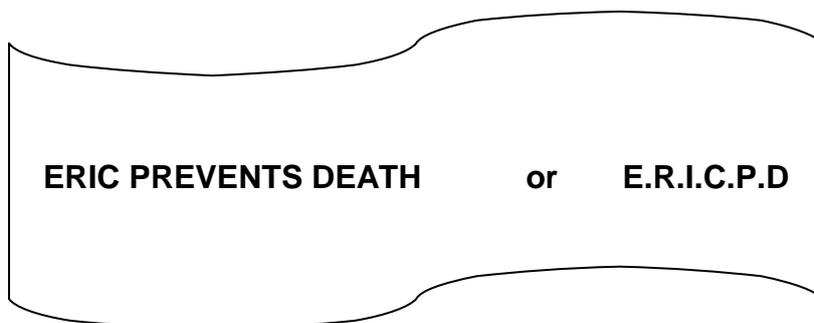
Not all chemical hazards are equally dangerous and the same goes for biological hazards, physical etc.

Whatever the type of hazard and the scale of danger presented by it, the overall approach to control is the same.

## CONTROL MEASURES

There is a *hierarchy of control* measures. This simply means there is a pecking order. Some control measures are more desirable than others.

There is a simple way of remembering the order of control measures.



Of all the acronyms in health and safety I think this is the most important one as it underpins so much of H&S management

- E Eliminate** – design out the substance, eradicate hazardous tools, stop the hazardous activity.
- R Reduce** or substitute with something safer.
- I Isolate** – separate the hazard from the people.
- C Controls** Use specific methods to **control** the hazard such as job rotation.
- P PPE** – Personal Protective Equipment.
- D Discipline** – when nothing else is appropriate it's down to following the rules.

### **Eliminate**

The preferred and best response to any identified hazard is to eliminate it. This is the reason why some companies no longer use manual bandsaws. By using automated bandsaws or contracting out the process they have eliminated the hazard from their company.

### **Reduce**

If it cannot be eliminated then Reduce the hazard. If electricity must be used in a damp environment then substitute 110v for 240v and reduce the risk. Use less hazardous cleaning chemicals.

### **Isolate**

Guarding on equipment is an important means of isolating and separating the hazardous equipment from the operator.

Segregate people from the hazard by using barriers to keep them away from hot surfaces, traffic routes etc.

If something is really dangerous then perhaps it will have to be operated remotely. This may be common in the petrochemical industry and nuclear power stations, but there are no examples I can think of in the seafood industry. If you can, then let me know.

**Controls** equipment is controlled using sound proofing.

- Dangerous fumes can be controlled using ducting and filters.
- Potentially dangerous voltages can be rendered safer by using RCDs (residual control devices). These are also very useful in the home for power tools etc.
- A permit to work is a way of controlling the operation of a potentially hazardous job.
- Safe systems of work are something that every employer should have in place to ensure the safety of the workforce.
- Monitoring.
- Training, instruction and supervision.

## **Personal Protective Equipment**

For more information on PPE go back to Segment Six.

For this Segment it is sufficient to say that PPE is:

- used as a last resort when none of the above is sufficient;
- a short term measure;
- commonly also used in emergencies.

### **Discipline**

- Company procedures.
- Rules.
- Self discipline.
- Disciplinary procedures and company sanctions.
- Signs and posters.

Discipline is only suitable for low grade hazards where the risk is not too great.

## **EMPLOYMENT MEDICAL ADVISORY SERVICE (E M A S)**

The Service is staffed by doctors and nurses who are specialists in occupational health and who are specifically able to

- Assess how individual or group health is affected by work;
- Advise on how an individual's capacity for work is affected by their health;
- Advise on workplace first-aid provision; and
- Support health promotion programmes.

The Service's doctors and nurses enjoy all the statutory powers of other HSE inspectors.