UNIT-1 COSHH Basics

Learning Outcomes
By the end of this unit the learner will be able to:

Unit 1

COSHH Basics

What is COSHH for?

COSHH stands for **'Control of Substances Hazardous to Health'.**

COSHH is the law that requires employers to control substances that are hazardous to health. You can prevent or reduce workers exposure to hazardous substances by:

- finding out what the health hazards are;
- deciding how to prevent harm to health (risk assessment);
- providing control measures to reduce harm to health;
- making sure they are used ;
- keeping all control measures in good working order;
- providing information, instruction and training for employees and others;
- providing monitoring and health surveillance in appropriate cases;
- planning for emergencies.

Most businesses use substances, or products that are mixtures of substances. Some processes create substances. These could cause harm to employees, contractors and other people.

Sometimes substances are easily recognised as harmful. Common substances such as paint, bleach or dust from natural materials may also be harmful.

Under the COSHH regulations, employers and employees have a number of important duties to protect their own and others health from work with hazardous substances. These COSHH responsibilities are a legal requirement; let's take a look at what employers and employees need to do.

COSHH employer responsibilities

Employer's responsibilities include:
Exposure - Employers must prevent or control exposure to hazardous substances. This can include the provision of appropriate personal protective equipment (PPE) where necessary
Control measures - Implement control measures around hazardous substances and ensure these are maintained and kept up to date, in full working order and clean where appropriate
Instruction - Provide employees with information, instruction and training around working with hazardous substances
Procedures - Having procedures in place to deal with accidents and emergencies relating to hazardous substances
Surveillance - Ensure employees exposed to hazardous substances are under adequate surveillance
Risk assessments - Carry out COSHH risk assessments.

Limits - Ensure the use of hazardous substances doesn't exceed the Workplace Exposure Limit (WEL).
Supervision - Check employees are carrying out tasks as they are supposed to.

Employee responsibilities

Employees have the responsibility to ensure that tasks are carried out safely to ensure no harm comes to themselves or others. These include:
Safety - Assist their fellow employees in creating a safe working environment. This can include supporting colleagues to abide by the regulations specific to their workplace
Procedures - Follow the procedures put in place to stop accidents and overexposure
PPE (personal protective equipment) - Wear the correct PPE including eye and noise protection. This includes ensuring all PPE is stored correctly in the appropriate place
Reporting - Report and record all accident, spillages and breakages
Check-ups - Attend medical check-ups when required to
Cleaning - Use cleaning and showering facilities provided by employers in line with official procedures
Training - Keep up to date with training provided by employers.

What are the COSHH symbols and their meanings?

There are nine primary hazard symbols relating to COSHH and this section will explain the COSHH signs.

Explosive (Symbol: exploding bomb)

Flammable (Symbol: flame)

Oxidising (Symbol: flame over circle)

Corrosive (Symbol: corrosion)

Acute toxicity (Symbol: skull and crossbones)

Hazardous to the environment (Symbol: environment)

Health hazard/Hazardous to the ozone layer (Symbol: exclamation mark)

Serious health hazard (Symbol: health hazard)

Gas under pressure (Symbol: gas cylinder)

Dangerous to the environment - Chemicals that may present an immediate or delayed danger to aspects of the environment – wildlife, plant life, people, weather systems.
Toxic - Chemicals that at low levels cause damage to health. When the sign includes a T+ in the top left-hand corner, it means chemicals that can cause damage to health at very low levels.
Oxidising - Chemicals and preparations that react exothermically with other chemicals – often resulting in combustion. Common oxidizing agents are oxygen, hydrogen peroxide and the halogens.
Corrosive - Substances that can damage or destroy other substances with which it comes into contact by means of a chemical reaction. These can exist as any state of matter,

including liquids, solids, gases, mists and vapours.
Longer-term health hazards - This sign indicates the presence of a cancer-causing (carcinogenic) agent or substance with respiratory, reproductive or organ toxicity that causes damage over time (a chronic, or long-term, health hazard).
Caution - Caution relates to slightly less hazardous substances that may not pose an immediate or severe threat to health but should be handled carefully within the workplace.

What is a 'substance hazardous to health'?

COSHH covers

COSHH covers substances that are hazardous to health. Substances can take many forms and include:

- **chemicals**
- **products containing chemicals**
- **fumes**
- **dusts**
- **vapours**
- **mists**
- **nanotechnology**
- **gases** and **asphyxiating gases** and
- **biological agents** (germs). If the packaging has any of the hazard symbols then it is classed as a hazardous substance.
- germs that cause diseases such as leptospirosis or legionnaires disease and germs used in laboratories.

Read more about COSHH and what you need to do and COSHH assessments.

COSHH does not cover

- lead,
- asbestos or
- radioactive substances

because these have their own specific regulations.

Working with hazardous substances

What is a substance hazardous to health?

A substance hazardous to health is a substance or mixture with the potential to cause harm if they are inhaled, ingested, or come into contact, or are absorbed through the skin

The COSHH Regulations apply to any substance:

a) which is listed in Table 3.2 of part 3 Annex VI of the CLP Regulation and for which an indication of danger specified for the substance is very toxic, toxic, harmful, corrosive or irritant;

b) for which the Health and Safety Executive has approved a Workplace Exposure Limit

c) Which is a biological agent

d) Which is dust of any kind, except dust which is a substance within paragraph (a) or (b) above, when present at a concentration in air equal to or greater than

10 mg/m3 as a time weighted average over an 8 hour period of inhalable dust or

4mg/m3 as a time weighted average over an 8 hour period of respirable dust

e) Which, not being a substance falling within sub-paragraphs (a) to (d), because of its chemical or toxicological properties and the way it is used or is present at the workplace creates a risk to health

About infections at work

Infections at work are those created by exposure to harmful micro-organisms such as bacteria, fungi, viruses, internal parasites, and other infectious proteins known as prions. These are called 'biological agents' in health and safety legislation. You may be harmed by micro-organisms by being infected with the micro-organism, by being exposed to toxins produced by the micro-organism, or by having an allergic reaction to the micro-organism or substances it produces.

Micro-organisms are found virtually everywhere in the natural environment. Most of these are harmless to humans and do many important jobs. They are used to make medicine. They can break down the oil from oil spills. They make about half of the oxygen we breathe. However, certain micro-organisms can cause harm - either by infection, allergy or being toxic.

You may come into contact with micro-organisms at work because you intentionally work with them, eg in a microbiology laboratory. But you are more likely to be exposed as a result of the kind of work you do, eg as a farmer, or a healthcare worker ie the exposure is incidental to the purpose of the work.

There were over 2000 new cases of occupationally acquired infection reported in 2002, an increase on the previous year's figure. The most common type of infection was diarrhoeal disease and most cases of infection were reported in healthcare workers.

In most work premises where there is either intentional work with micro-organisms (eg microbiology laboratories and research facilities) or a relatively high likelihood of occupational exposure (eg hospitals and nursing homes) the HSE is the regulatory body. However, in some cases where the possibility of exposure is incidental to the purpose of the work (see above) the regulatory body may

be the local authority. Examples of such workplaces, where the regulation of safety is the responsibility of the local authority, are skin piercing and tattoo parlours (where there may be a risk of transmission of blood-borne viruses) and large office blocks (where cooling towers could be source of Legionnaires' disease).

What you need to do

Before you start your COSHH assessment, you need to:

Think about

- What do you do that involves hazardous substances?
- How can these cause harm?
- How can you reduce the risk of harm occurring?

Always try to prevent exposure at source. For example:

- Can you avoid using a hazardous substance or use a safer process – preventing exposure, eg using water-based rather than solvent-based products, applying by brush rather than spraying?
- Can you substitute it for something safer – eg swap an irritant cleaning product for something milder, or using a vacuum cleaner rather than a brush?
- Can you use a safer form, eg can you use a solid rather than liquid to avoid splashes or a waxy solid instead of a dry powder to avoid dust?

Check your trade press and talk to employees. At trade meetings, ask others in your industry for ideas.

If you can't prevent exposure, you need to control it adequately by applying the principles of good control practice.

Control is adequate when the risk of harm is 'as low as is reasonably practicable'.

This means:

- All control measures are in good working order.
- Exposures are below the Workplace Exposure Limit, where one exists.
- Exposure to substances that cause cancer, asthma or genetic damage is reduced to as low a level as possible.

Further Reading: