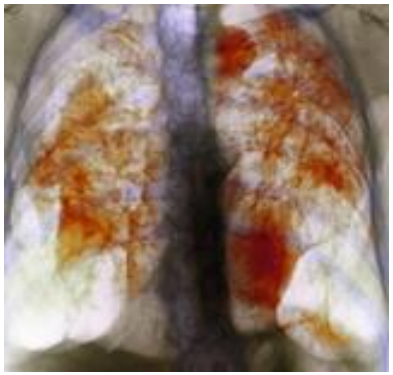
Diseases related to occupational hazards

YEAR
1439-1440 Hajji
2018 - 2019 Gregorian

	Objectives
	1. understand major diseases related to occupational hazards 2. Physical hazards, heat, light, pressure, noise, radiation, electricity, mechanical factors, Chemical agents Gases, fumes, dust, metals and their compounds, solvents, Biological agents, Occupational cancers, Occupational dermatosis

Occupational disease:

The term "occupational disease" refers to those illnesses caused by exposures at the workplace.



They should be separated, conceptually, from injuries that may also occur at workplaces due to a variety of hazards.

Occupational diseases may occur in varying time frames,

from the instantaneous development of illness following exposure to toxic chemicals

to decades between onset of exposure and the development of disease, as occurs with many occupationally related cancers.

Examples of varying time frames include

- instantaneous reactions to exposure to chemicals such as chlorine or ammonia gas;

- a delay of some six to twelve hours with fumes of aerosolized zinc, as occurs when welding on galvanized steel;

- a delay of weeks to months with lead poisoning;

- a delay of decades with occupational carcinogens;

- the finding of congenital malformations in children whose parents may have been exposed to hazardous materials.

Although not all occupational exposures that cause illness lead to death, considerable numbers of deaths each year are associated with workplace exposures.

While it is relatively easy to count deaths due to occupational injuries, it is much more difficult for delayed illnesses.

More than 6,200 fatal occupational injuries occur in the United States each year, with more than 40 percent associated with transportation, and most of these related to motor-vehicle fatalities.

As noted above, deaths from occupational illness for most diseases are hard to enumerate.

The only diseases for which reasonably good data exists are the pneumoconiosis, such as asbestosis, coal-workers pneumoconiosis, and silicosis.

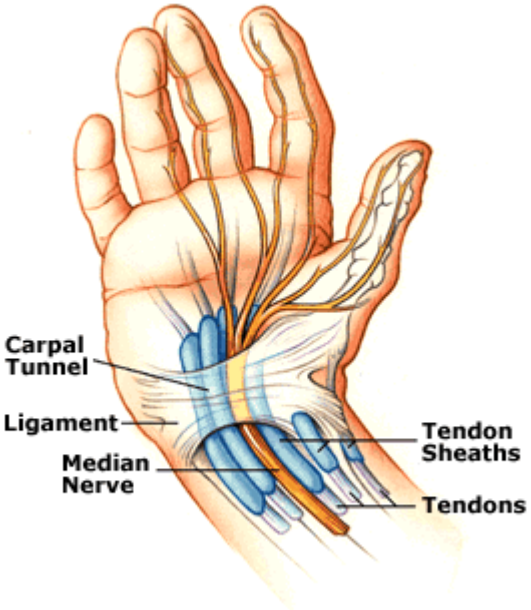
ASBESTOS

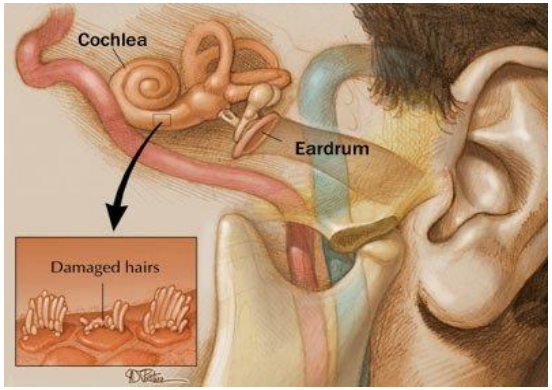

silicosis

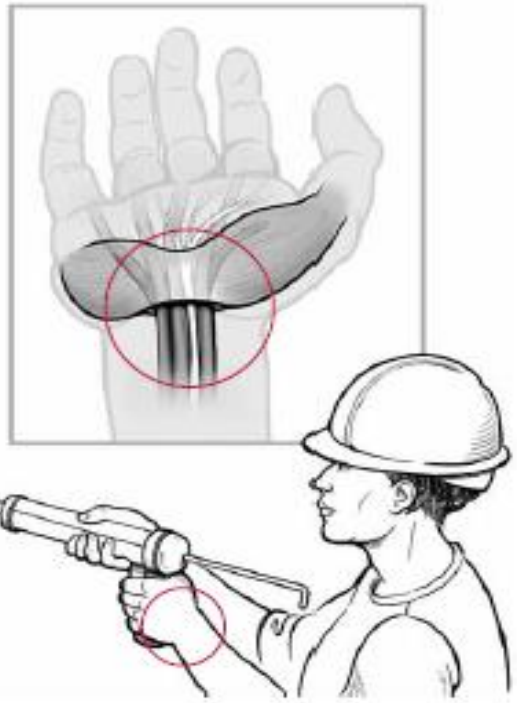
For many other diseases, such as those from chemical exposure, various occupational cancers, and other problems, individual fatalities are difficult to recognize and record.

Among the occupational diseases most commonly reported, those relating to repeated trauma, such as carpal tunnel syndrome, tendonitis, and

noise–induced hearing loss







For those cases of carpal tunnel syndrome with workplace absence, half needed twenty-five or more days away from work.

Skin diseases represented about 13 percent of work related illnesses.

Occupational Dermatitis is often an inflammatory skin reaction caused by occupational contact factors.

Dermatitis, or inflammation of the skin cases required time away from work.

1. Noise:

Noise is most obviously a problem in industries such as manufacturing and construction, it can also be an issue in a wide range of other working environments

One in five of Europe's workers have to raise their voices to be heard for at least half of the time that they are at work and 7% suffer from work-related hearing difficulties.

Noise induced hearing loss is the most common reported occupational disease in the EU.

What is noise?

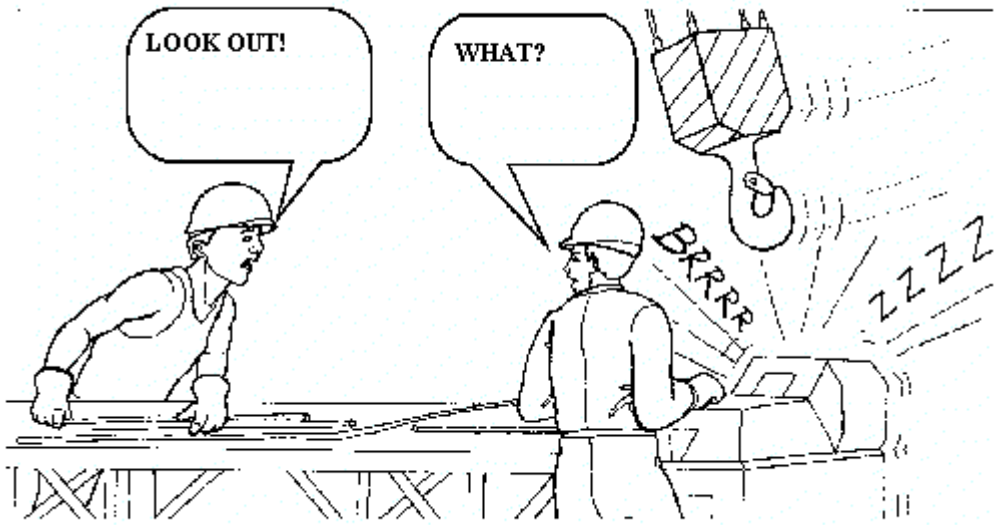
Noise is an unwanted sound;

its intensity (‘loudness’) is measured in decibels (dB).

The decibel scale is logarithmic, so a three-decibel increase in the sound level already represents a doubling of the noise intensity.

For example, a normal conversation may be about 65 dB and someone shouting typically can be around 80dB.

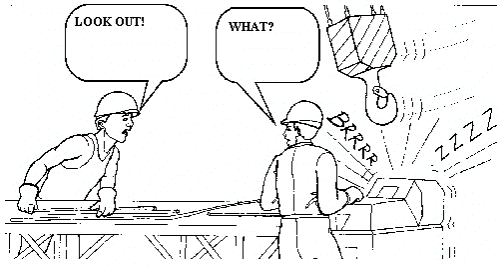
The difference is only 15 dB but the shouting is 30 times as intensive



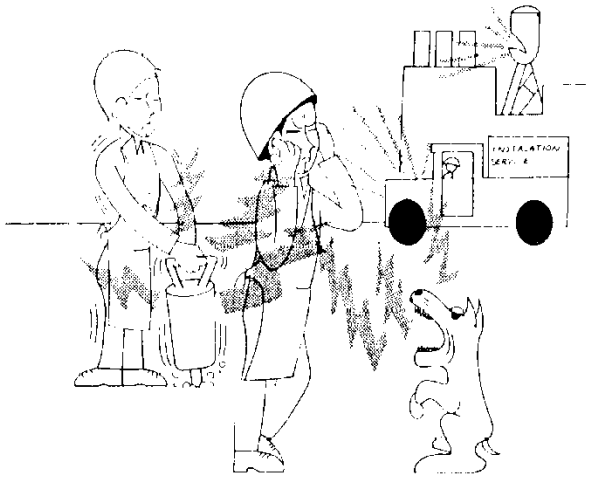
The duration of exposure is also very important. To take this into account, time-weighted average sound levels are used. For workplace noise, this is usually based on an 8-hour working day.

PERMISSIBLE NOISE EXPOSURES	
Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

What problems can noise cause?



- Increasing the risk of accidents by masking warning signals;
- Physiological effects
- Increase the risk of hearing loss;
- Being a causal factor in work-related stress.



Who is at risk?

Anyone who is exposed to noise is potentially at risk.

The higher the noise level, and the longer you are exposed to it, the more risk you have of suffering harm from noise.

Noise is being recognized as a problem in service sectors such as education and healthcare, bars and restaurants.

A study of noise in kindergartens found some averaging noise levels over 85dB

During a performance of Swan Lake, a conductor was recorded as being exposed to 88dB

Truck drivers can be exposed to 89dB

Noise on pig farms has been measured up to 115dB

2. Heat Stress

Workers who are exposed to extreme heat or work in hot environments may be at risk of heat stress.

Exposure to extreme heat can result in occupational illnesses and injuries.

Heat stress can result in

- heat stroke,
- heat exhaustion,
- heat cramps, or
- heat rashes.

Heat can also increase the risk of injuries in workers as it may result in

- sweaty palms,
- fogged-up safety glasses,
- dizziness.

Burns may also occur as a result of accidental contact with hot surfaces or steam.

Workers at risk of heat stress include outdoor workers and workers in hot environments such as

firefighters, bakery workers, farmers, construction workers, miners, boiler room workers, factory workers, and others.

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