

Chapter One – Safety and Health Movement: An Overview

1. To what cause(s) can the improvements in workplace safety made to date be attributed?

Improvements in safety up to now have been the result of pressure for legislation to promote safety and health, the steadily increasing costs associated with accidents and injuries, and the professionalization of safety as an occupation.

2. Explain the significance of the Code of Hammurabi in terms of the safety movement.

What is significant about the code from the perspective of safety and health is that it contained clauses dealing with injuries, allowable fees for physicians, and monetary damages assessed against those who injured others.

3. Describe the circumstances that led to the development of the first organized safety program.

In 1892 in a Joliet, Illinois, steel plant the first recorded safety program was established in response to a scare caused when a flywheel exploded. Following the explosion a committee of managers was formed to investigate and make recommendations.

4. What is Frederick Taylor's connection to the safety movement?

Although safety was not a major focus of his work, Taylor did draw a connection between lost personnel time and management policies and procedures. This connection between safety and management represented a major step toward broad-based safety consciousness.

5. Explain the development of the National Safety Council.

The Association of Iron and Steel Electrical Engineers (AISEE), formed in the early 1900s, pressed for a national conference on safety. As a result of the AISEE's efforts, the first meeting of the Cooperative Safety Congress took place in Milwaukee in 1912. A year after the initial meeting of the Cooperative Safety Congress, the National Council of Industrial Safety was established in Chicago, Illinois. In 1915, this organization changed its name to the National Safety Council.

6. What impact did labor shortages in World War II have on the safety movement?

The loss of a skilled worker due to an injury or for any other reason created an excessive hardship.

7. Explain how workplace tragedies have affected the safety movement. Give examples.

Safety and health tragedies in the workplace have greatly accelerated the pace of the safety movement. Three of the most significant events in the history of the safety and health movement were the Hawk's Nest, asbestos menace, and Bhopal tragedies.

8. Explain the primary reasons behind the passage of OSHA.

Generally, the state legislated safety requirements only in specific industries, had inadequate safety and health standards, and had inadequate budgets for enforcement. The injury and death toll due to industrial mishaps was still too high. In the late 1960s, more than 14,000 employees were killed annually in connection with their jobs. Work injury rates were taking an upward swing.

9. Summarize briefly the role organized labor has played in the advancement of the safety movement.

Organized labor has fought for safer working conditions and appropriate compensation for workers injured on the job.

10. Define the following terms: fellow servant rule; contributory negligence; assumption of risk.

The most important contributions of organized labor to the safety movement was their work to overturn anti-labor laws relating to safety in the workplace. The fellow servant

rule held that employees were not liable for workplace injuries that resulted from the negligence of other employees. If the actions of employees contributed to their own injuries, the employer was absolved of any liability. This was the doctrine of contributory negligence. Assumption of risk was based on the theory that people who accept a job assume the risks that go with it.

11. Explain the Three E's of Safety.

Three E's of Safety: Engineering - involves making design improvements to both product and process; Education - ensures that employees know how to work safely; and Enforcement - involves making sure that employees abide by safety policies, rules, regulations, practices, and procedures.

12. Explain the term *integration* as it relates to modern safety and health.

By working together and drawing on their own respective areas of expertise, safety and health professionals are better able to identify, predict, control, and correct safety and health problems.

13. Total Safety management is a holistic approach to workplace safety in which safety is a key concern of everyone from the lowest level employees to the top executive. The goal is to involve everyone in continually improving the safety of the environment.

14. Safety enhances productivity by reducing the number of accidents and incidents that remove highly-skilled personnel from the job and by allowing workers to focus on doing their jobs better rather than worrying about being hurt in an accident.

Chapter Two – Accidents and Their Effects

1. What are the leading causes of death in the United States?

Accidents are the fourth leading cause of death in this country behind heart disease, cancer, and strokes.

2. When the overall cost of an accident is calculated, what elements make up the cost?

These costs include such factors as lost wages, medical expenses, insurance administration, fire-related losses, motor vehicle property damage, and indirect costs.

3. What are the five leading causes of accidental deaths in the United States?

Motor vehicle, poison (solid, liquid), drowning, falls, and fire-related

4. What are the leading causes of death in the United States of people between the ages of 25 and 44?

Accidents, motor vehicle, poison (solid, liquid), drowning, falls, fire-related, cancer, and heart disease

5. Explain how today's rate of accidental work deaths now compares with the rate of the early 1900s.

Between 1912 and 1989, accidental work deaths per 100,000 population were reduced 81 percent, from 21 to 4.

6. What are the five leading causes of work deaths?

Motor vehicle related, falls, electric current, drowning, and fire-related

7. What are the five leading causes of work injuries by type of accident?

Overexertion, impact accidents, falls, bodily reaction, and compression.

8. When death rates are classified by industry type, what are the three leading industry types?

Mining/quarrying, agriculture, construction

9. Rank the following body parts according to frequency of injury from highest to lowest: neck, fingers, trunk, back, and eyes.

Back, fingers, trunk, eyes, and neck

10. Name three chemicals that frequently cause chemical burns in the workplace.

Acids and alkalies; soaps, detergents, and cleaning compounds; solvents and degreasers; calcium hydroxide; potassium hydroxide; and sulfuric acids

11. Identify three factors that contribute to heat burn injuries in the workplace.

☐ Employer has no safety and health policy regarding heat hazards.
☐ Employer fails to enforce safety procedures and practices.
☐ Employees are not familiar with the employer's safety policy and procedures concerning heat hazards.

☐ Employees fail to use or improperly use personal protection equipment.

☐ Employees have inadequate or worn personal protection equipment.

☐ Employees work in a limited space.

☐ Employees attempt to work too fast.

☐ Employees are careless.

☐ Employees have poorly maintained tools and equipment.

12. Explain the difference between RSI and carpal tunnel syndrome.

Carpal tunnel syndrome (CTS) is an injury to the median nerve inside the wrist. CTS is typically caused by repeated and cumulative stress on the median nerve. RSI is a broad and generic term that encompasses a variety of injuries resulting from cumulative trauma to the soft tissues of the body.

13. Explain the reasons for high accident rates in developing countries.

☐ Rapid development and the pressure of global competition

☐ Missing safety and health infrastructure

14. Explain how to establish a safety-first corporate culture in an organization.

Understand, assess, plan, expect, model, orient, mentor, train, monitor, and reinforce.