

Lecture 1

Occupational & Environmental Medicine

History

Occupational & Environmental Medicine are specialties that stand at the fascinating interface between clinical medicine and public health. They are specialties that require mastery of all the arts of medicine (history taking, physical examination, investigation, diagnosis and therapy).

In addition, these disciplines also demand knowledge of epidemiology, toxicology, industrial engineering, the behavioral science, history and law.

The specialties of Occupational & Environmental Medicine are heir to several historical traditions.

They are descendants of Hippocrates, who urged physicians to always consider the enter play between the patient and the environment. These specialties owe to **Bernardino Ramazzini**, recognized worldwide as the father of occupational medicine, dates the birth of the discipline back to 1700 when *De Morbis Artificum Diatriba* was published in Modena, Italy. He should take time for his examination, he should add one more; What is your occupation?.

Ramazzini, Agricola and Paracelsus, all pioneering physicians who early perceived the relationship between work and disease.

Sir Thomas Legge in 1898 became the first medical inspector of factories in England.

Alice Hamilton was the first American physician to devote her life to the practice of industrial medicine 1925.

Alice Hamilton was the first woman appointed to the medical faculty at Harvard in 1919.

More recently, environmental and occupational medicine have been influenced by the sanitary reform movement of the 1930, and by the environmental movement today.

Environmental and occupational medicine are specialties confronting rapid change. Each year hundreds of new synthetic chemical compounds are developed by the chemical industry and are added to the 70,000 chemicals and to the 10,000,000 mixtures, formulations and blends in commerce. Too frequently, these new chemicals are released in the workplace and in the environmental without adequate prior assessment of their potential for toxicity.

Workers are typically the first to be exposed to these toxicities, and the consequences of careless exposures to untested technologies fall most heavily on workers and on the vulnerable members of our society (infants, children, and the elderly) with roots in the early industrial revolution, industrial medicine has been to corporate practice and to the study of the health effects of environmental and occupational medicine on a global scope. There is now concern for transnational transport of substances such as mercury from coal combustion or gold mining to take ecosystems where

biotransformation concentrates mercury 225,000 folds greater in fish than in the water. Xenobiotics may act as endocrine hormones in various species and may lead to reproductive disruption.

Enhanced ultraviolet radiation from destruction of stratospheric ozone may increase skin cancer in temperate latitudes. The focus in occupational medicine has changed from acute injuries, dermatitis, burns and laceration to chronic conditions, especially, pneumoconioses and to issues surrounding airways disease, ergonomics.

Prevention of disease is the ultimate goal of environmental and occupational medicine.

Epidemiology and toxicology are the essential discipline that provide the scientific basis for prevention of environmental and occupational disease and the play complementary roles.

Occupational Health (WHO,ILO,Def.)

The promotion and maintenance of the highest degree of physical, mental, and social wellbeing of the workers in all occupations.

(Adaptation of work to man and each man to his job).

Summary definition.

Ergonomic objective of occupational health services.

Occupational health services

Occupational health services must be an integral part or fully co_ordinated with national health service provider preventive and curative services at the work place and should be essentially :

1. To promote and maintain the highest degree of physical, mental, and social wellbeing of the workers in all occupations.
2. To provide effective measures to protect those people who are vulnerable to adverse work condition(risk group).
3. To prevent occupational health hazard among worker caused by there working condition and non occupational hazard and mental rehabilitation of disability.
4. To ensure the physical and mental demands capability of the worker to his job(physical fitness).(satisfaction and wellbeing at work).
5. Environmental control outside workplace.
{Discharge of the toxic product(effluent) from the industry}

Functions of occupational health center.

1. Provide medical and nursing services for the employed population e.g.
 - A. Pre- employment medical examination.
 - B. Periodical medical examination.
 - C. First -aid and emergency.
 - D. Examination and treatment of employees.
2. Determine a worker fitness(physical &psychological) by:-
 - A. Pre employment medical examination.
 - B. Periodical medical examination to detect early as possible adverse effect.
 - C. First aid and emergency.
 - D. Examination and treatment employees.
3. To verify his adaptation to his job and the working environment and do not adversely health effect.
4. Providing protective services for occupational disease and accidents.
5. Training health education and advice to worker particularly for the occupational disease and accidents. preventive measures, further more in the industrial and personal hygiene and protective safely precaution
6. screening of the hygiene and working environment e.g. dust, fumes, gases, noise, waste disposal (by inspect workplace) then environmental and biological monitoring should be measured.
7. Referral of employees to specialist and hospital for further investigation and treatment.
8. Assessment of fitness for particular jobs after illness or injury with view to rehabilitation.
9. Administrative duty and recording of all illness and accidents.

Five star doctors (Doctor of the future).

1. Care provider.
Means provision health services and promotion to the community.
2. Decision makers.
Ability to make decision
3. Communicator relationship with other.
4. Community leader.
5. Team member.