



Health study of chemical and mining workers and measures to prevent diseases

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KEYWORDS :

Health as defined by WHO: Health is a state of physical, Mental & social well being and not merely an absence of disease or infirmity.

Right to Health is given in Universal Declaration of Human Rights in 1948, as stated in Article 25: Everyone has the right to a standard of living adequate for the health and well being of himself & his family.

A Survey was conducted for obtaining information about occupational diseases in around 50 chemical & local mining factories over a particular area.

The study was conducted by a cohort study (a retrospective study).

A population of 200 workers of 50 chemical factories was examined under a health check up.

They were examined for various lungs, skin disorders. Also they were asked for any psychological problems.

The survey concluded that most of the workers suffered from psychological stress due to heavy workload at their work place.

Around 10% of the workers suffered from mild to severe respiratory problems.

Some workers also developed skin diseases in form of dermatitis & eczema.

Among respiratory problem; pneumoconiosis (a disease d/t silica & asbestos use) was more prevalent. This disease is mainly seen in coal mine workers.

They presented with irritant cough, pain in chest & dispnd on exertion.

On general examination, some workers had high blood pressure records. Some were diagnosed for the first time.

On the part of the management, the workers were not given proper treatment opposite to the amount of work they were supposed to be doing. About 60% of the workers also fall under malnourishment criteria.

Management should start caring for their worker in the following ways.

- A 6 monthly regular Health check up for all the workers so that any disease can be picked up in its early stage.
- Sickness absenteeism - it is a useful index to access the state of health of workers.
- Adequate pre-placement examination – Whenever new workers are recruited in the factory, there should be proper health check up to diagnose any previous health disease or any risk factor which could be aggravated by the job.
- Application of ergonomics- Ergonomics is fitting the job to the person. Training in ergonomics involves - designing of machines, tools, equipment & manufacturing processes, layout of the places of work, methods of work & environment in order to achieve greater efficiency of both Man & Machine. The objective of ergonomics

is to achieve the best mutual adjustment of Man & his work for the improvement of human efficiency & well being.

- Good human Relations- There should be a strong bond between the higher authorities of the factory with each worker so that if there is any problem for any worker, they should be able to talk to the managing authority.

- Nutrition- Under the Indian Factories Act, it is obligatory on the part of the industrial establishments to provide a canteen when the number of employees exceeds 250. The aim is to provide balanced diets or snacks at reasonable cost under sanitary control.

- Communicable disease control – It is general objective everywhere to detect cases of communicable disease and to render them non-infectious to others by treatment or removal from the working environment.

- Environmental sanitation-
 - i) Water Supply- A sufficient supply of wholesome drinking water is one of the basic requirements in all industrial establishments.

- ii) Food- Education of food handlers & other measures may be necessary to prevent outbreaks of gastro-intestinal diseases.

- iii) Toilet- There should be sufficient no of latrines & urinals of the sanitary type. Recommendation is that at least one sanitary convenience for every 25 employesss (male & females separate) for first 100 employees, thereafter one for every 50.

- iv) General plant cleanliness- The walls ceilings & passages should be painted with water washable paints & repainted at least once in 3 years & washed at least once in 6 months. The dust which settles down on the floor & Machinery should be promptly removed by vacuum cleaners or by wetting agents.

- v) Sufficient space- sufficient floor space & cubic space are essential to prevent not only respiratory infections but also to ensure a comfortable working environment. The recommended standard is a minimum of 500 cu ft. of space for every worker;

- vi) Lighting- The standards of illumination-precision work for a high degree of accuracy may require 50-75 foot candles; where illumination in corridors & passages should be 0.5 foot candles

- vii) Ventilation; Temperature - proper ventilation is needed for control of noxious vapors, fumes & dust and prevention of fatigue & industrial accidents.

- Mental Health- The goals of mental health in industry are;-
 - i) To promote the health & happiness of the workers
 - ii) To detect signs of emotional stress & strain & to secure relief of stress & strain where possible.
 - iii) The treatment of employees suffering from mental illness.
 - iv) The rehabilitation of those who become ill.

- Health education.
- Substitution-

Replacement of a harmful material by a harmless one or one of a lesser toxicity.

- Protective devices;
Respirators & gas masks used to protect workers against air-borne contaminants. Other devices include – ear plugs, ear muffs, helmets, safety shoes, aprons, gloves, gum boots, barrier creams, screens and goggles.
- Statistical Monitoring-
Main objective is to evaluate the adequacy of preventive measures & occupational health criteria, including permissible exposure levels.
- Employees state Insurance Act,1948.
It provides for certain cash & Medical benefits to industrial employees in case of sickness, Maternity & employment injury.

Benefits- Medical
Sickness
Maternity
Disablement
Dependant's
Funeral expenses
Rehabilitation allowance.

The Survey team concluded that all these measures should be taken into action & the managing authority should develop a friendly relationship with every worker so that all the members work as a team & it will lead to great outcome in terms of both production as well as good health.