Prevention of Occupational Diseases

The work environment plays a significant role in our health. Workplace fatalities, injuries and illnesses are high and lead to an enormous health burden, suffering, and economic loss. Which is why, a proactive approach to health and safety at work can help employers achieve healthier employees, low absenteeism, fewer injuries, lower long-term risk, and lower payouts for disability and health care costs.

Occupational Health is that field of medicine which deals with relationships between the human body and work conditions. Occupational Medicine is the clinical specialty which deals with the diagnosis, management and prevention of diseases caused or exacerbated by workplace factors. Its principal role is the provision of health advice to organizations and individuals to ensure that the highest standards of health and safety at work can be achieved and maintained. Essentially preventive in nature, the objectives of Occupational Medicine are to:

- Promote and maintain the highest degree of physical, mental and social well-being of employees in all occupations;
- Prevent diseases among workers caused by their working conditions;
- Protect employees from risk factors which could affect their health;
- Place & maintain of workers in an occupational environment adapted to their physiological & psychological status.

Occupational diseases - disorders of health resulting from conditions related to the workplace.

Work-related diseases can appear according to the work conditions & can be determined by:

- **Physical factors:** noise, vibrations, emission of rays, industrial microclimate (environment)
- **Chemical factors:** toxic chemical substances (exposure to chemicals, irritating gases, fumes)
- **Biological factors:** viruses, parasites, fungi, microbes
- **Psychological factors:** overstress, inadequate work conditions, inappropriate relationship between colleagues etc.
Toxic Effects

Toxic effects can often be limited if exposure ceases and treatment is started early. When a worker is recognized as having an occupational disease, others exposed to the possible cause can be protected before they develop the illness.

The occupational physician is required to communicate with clinical colleagues responsible for the primary care of the workers, with other health professionals active in the multi-disciplinary practice of occupational health, as well as with management and staff representatives (Health & Safety Department) in the workplace in order to diagnose occupational health related diseases in their incipient stages for a proper management and control.
How to prevent occupational diseases or aggravation of existing diseases?

- **Good job safety and prevention practices** can reduce your risk of occupational diseases: try to stay fit, reduce stress, set up your work area properly and use the right protective equipment (PPE). An understanding of basic workplace health and safety issues means you can protect yourself against workplace hazards.

- **Recognize risks/hazards or health & safety problems**
  - There are some of the ways you can identify health and safety problems:
    - observe your workplace;
    - investigate complaints from workers;
    - examine accident and near-miss records;
    - examine sickness figures;
    - use simple surveys to ask your co-workers about their health & concerns;
    - learn the results of inspections that are done;
    - Make sure you know and understand the hazards you are exposed to.
  - Once you recognize a hazard, then you can determine which measure will correct the problem most effectively.

- **Control measures** - there are five major categories of control measures: elimination, substitution, engineering controls, administrative controls & personal protective equipment

- **Eliminating or reducing exposure to the hazards in the workplaces** - Eliminating a hazard means removing it completely; substitution is replacing one hazardous agent or work process with a less dangerous one.

  - Elimination of a specific hazard or hazardous work process, or preventing it from entering the workplace, is the most effective method of control.

  - If you cannot completely eliminate a hazard, then use a combination of control methods to protect yourself and your co-workers from being exposed to occupational hazards.

- **Changing practices** when the existing ones are dangerous for the health (technical, engineering re-design, engineering control, administrative controls etc).

  - Engineering control may mean changing a piece of machinery (e.g., using proper machine guards)
  - Administrative control for example is job rotation leading to working a limited number of hours in a hazardous area or changing a work process to reduce exposure to a hazard.

- **Using adequate PPE** including ear and eye protection, masks, respirators, and protective clothing – according to the exposure type.

- **Occupational medical screening** is intended to detect adverse health conditions that result from hazards and diagnose diseases existing in or derived from the workplace. The most effective control of occupational disease is by **primary prevention**, which means preventing exposure or diminishing exposure to an acceptable level. **Secondary prevention** or treatment of the exposed is less effective in reducing disease.

  - Screening programs are intended to supplement control efforts, not replace them. The importance of screening is that it contributes to the early detection of disease in the individual and can lead to better prevention to those who share his exposures and risks.

- **Medical observation** of individuals will highlight the hazards that are not controlled sufficiently, that way, health & safety policies can be improved in the company.

“It is always better to control the hazard as close to the source as possible. Using personal protection is the least acceptable and least effective of all control measures.”
- (International Labor Organization/ ILO)
How to prevent occupational health diseases...

- Best results are observed when everyone involved: workers, supervisors & management takes their responsibility and work together for a safer and healthier work environment.

  **Occupational Health Medicals** including complete physical examination, paraclinical and laboratory investigations are advised to be done regularly as a preventive screening or as a periodical control of the health’s status of men & women.

  Executive Medical Check-ups are suggested in order to rule out major diseases which could affect the health status and if any to be investigated and treated from the very beginning, for avoiding complications or too late diagnostics and treatments.

- **Personal hygiene (cleanliness)** is also very important as a method of controlling hazards. Washing hands regularly, eating and smoking away from your work area help to prevent ingesting contaminants.

  Your family can be exposed to the hazards you work with if you bring chemicals and other workplace contaminants home with you on your clothes, hair or skin. Before you leave work, wash/shower and change your clothes when necessary to prevent bringing workplace contaminants home.

  Leave your dirty clothes at work or, if you must wash them at home, wash them separately, not with the family wash.

- **General measures:** think positive, try to solve the problems and responsibilities on time, have a healthy life style (including healthy foods, correct water intake of 2 liters of water/day, regular physical exercises, minimum eight sleeping hours daily) and try to create a positive atmosphere, not only in the workplace but also in the rest of your life in order to avoid supplementary problems.

  Try to create a balance between work and family life, social life, do not overload yourself, divide projects into smaller phases, and prioritize tasks, delegate responsibilities to colleagues working with you in certain projects.

  Always maintain a sense of humor, make sure to take short breaks throughout the day, to sit back and clear your mind.

  Also try to get away from your desk for lunch. Stepping away from work to briefly relax and recharge will help you be more, not less, productive.

  Meditation, listening to music, walking for 5 minutes can improve your mood significantly.

  Do not try to control the uncontrollable situations, adjust your standards, be realistic about what you can accomplish.

- **Educational Programs/ Awareness Programs** regarding health & safety issues; occupational health diseases; hygiene in the workplace; about where, when, why and how to use PPE; regarding importance of occupational health related medicals etc. can also help in preventing occupational health diseases.
Occupational diseases often develop over many months or years, depending on the intensity and circumstances of exposure. Occupational cancer, for example, is resulting from long exposure (years) to different chemicals, fibres, gases, fumes, radiations etc. Occupational diseases often resemble other medical conditions; for example, lead poisoning duplicates the symptoms of several illnesses and asthma resulting from sensitization to chemicals in the workplace is often falsely attributed to exposures at home allergens.

For these reasons, most occupational diseases are often overlooked or misdiagnosed and are undercounted in statistical reports. They are more common than is generally realized.

There are insufficient numbers of occupational physicians properly trained to care for the hundreds of thousands of cases of occupational disease.

Most occupational diseases are treated by primary-care physicians, and, unfortunately, many of them have had little or no training in occupational disease.

All physicians treating adults should have some concern for occupational diseases, whether in treatment or diagnosis or for the implications of certain exposures on the health of their patients. This is because occupational disorders may affect any organ system, may be the cause of unrecognized disease after retirement and occasionally affect other members of the family, if chemical exposures are brought home accidentally or through associated reproductive toxicity.

The obstacles to prevention are usually cost, lack of education and lack of motivation to change practices. The technical means to solve a problem are almost always available. Success in prevention ultimately rests on acceptance by the employer of one's responsibility, cooperation by the workers, teamwork by occupational health professionals, government regulation and education of the public.

Many large companies invest in occupational safety and health programs and have ongoing workplace assessments. Companies with strong programs are known to have lower injury rates. ☘

Medical Consultant for April 2012

Dr. Marian Melanie Jan Leys has 5 years of experience as a consultant for Occupational Medicine for a variety of clients in industry and government in Belgium.

Her responsibility involves inspection visits to workplace, risk analysis and development of medical prevention programs according to the companies, research and statistical analysis of work related risk, implementation of vaccination programs and tuberculosis screening programs, diagnosis of work-related pathology, evaluation of fitness to work of employees and advice on the use of collective and personal protection.

She graduated Cum Laude of Master in Medicine from KUL University Leuven, Belgium and pursued Master after Master in Occupational Medicine at School of Public Health, KUL, Belgium also graduating as Cum Laude.

She now works at CEDARS - Jebel Ali International Hospital as Occupational Health Physician and serves as the Head of the Department of Occupational Health.

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CEDARS - Jebel Ali International Hospital is upgraded as a Full Fledged Hospital since Aug 2004 with 16 beds including an ICU and one major and a minor Operation Theatre. With Specialties ranging from Occupational Health, Laparoscopic Surgery to Cardiology, CEDARS - Jebel Ali International Hospital aims to be the Complete Community Hospital for new Dubai and is geared to grow into a University Hospital in the near Future.