

FACT SHEET OF COAL WORKERS

(Spain, 2017)

I. DESCRIPTION OF WORK ENVIRONMENT AND OCCUPATIONAL EXPOSURES:

PHYSICAL HAZARDS

- Traumatic injuries (i.e.: rock falls, fires, explosions, mobile equipment accident, falls from height, entrapment and electrocution among others)
- Noise
- Heat and humidity in deep underground mines
- Vibration (whole body vibration and hand-arm vibration syndrome)
- Solar ultraviolet exposure in surface mining operations

CHEMICAL HAZARDS

- Dust (Coal dust: causing coal workers' pneumoconiosis or 'black lung' and chronic obstructive pulmonary disease)
- Skin and Ocular Irritants and other possible Chemical hazards

BIOLOGICAL HAZARDS

- In some remote locations: tropical diseases such as Malaria or Dengue fever
- Leptospirosis and ankylostomiasis
- Legionella contamination in cooling towers..
- Others

ERGONOMIC HAZARDS

- Cumulative trauma disorders
- Shift work
- Confined spaces

PSYCHOSOCIAL HAZARDS

- Remote locations
- Post-traumatic stress disorders in witnesses of severe traumatic injuries
- Drug and alcohol abuse

To sum up, workers exposed to these occupational conditions, have physical and mental demands. Personal factors that increase vulnerability with respect to them must be taken into account.

II. PERSONAL PROTECTIVE DEVICES

- Protective clothing, boots, helmet, gloves
- Protective eyewear
- Hearing protection
- Ocular protection and Facial Mask (with filter cartridge or a fresh air supply)
- Gas Detector
- Emergency lighting

III. HEALTH DEMANDS:

No relevant disorder of

- Lung function
- Cardiovascular system
- Vestibular system
- Hearing
- Vision function
- Skin
- Physical and mental condition
- Metabolic system
- Body weight

IV. MEDICAL EXAMINATION:

- Health assessment is mandatory before a person starts to work as a mine worker (Medical history including previous works and pathologies, clinical examination, chest X-ray, spirometry, and E.C.G)
- Worker Health Surveillance is also required:
 - Periodically (In underground mining during the first 10 years of the activity it is considered appropriate to carry out chest x-ray examinations every 3 years. Subsequently, radiological recognition must be performed annually)
 - When the occupational doctor estimates that is necessary on clinical bases
 - After prolonged absence due to health reasons
 - Post-occupational

V. MEDICAL EXAMINATION METHODS

- Medical history (atopy, bronchial hyperreactivity, smoking habits, etc., previous pathologies)
- Clinical examination.
 - Lung function (evaluated according to European Respiratory Society criteria)-Spirometry-
 - Chest-X-ray (two views frontal and lateral- X-ray for pneumoconiosis must be done according to the International Labor Organisation (ILO) Standard International Classification of Radiographs of Pneumoconioses)
 - Cardiovascular function-ECG
 - Laboratory screening and Biological tests
 - Otoscopy and screening
 - audiometry
 - Visual function examination (risk of accidents, perception of visual alarms)
 - Examination of Locomotor system

- Detection of accompanying pathologies

V. OCCUPATIONAL MEDICAL EXPERTISE and ADVICE

- A. Improvement of work environment
 - Risk assessment for each workplace and profession
 - Counseling on preventive measures/ advice to employer on improving conditions to reduce workplace related risks and environmental risks
- B. Improvement of personal behavior
 - Medical advice to individuals and groups of employees on
 - work related risks to health
 - health prevention and maintaining workability
 - Medical advice in according with the health status of each worker / group of workers (fit for work / specific activities / limits)
 - Workplace health promotion activity (topic proposals, member or coordinator of the team): Smoking cessation, not alcohol and drugs, etc..

VI. RE-INTEGRATION MANAGEMENT OF LONG TERM SICK EMPLOYEES

Return to work must be provided based on personalized schemes and scientific evidence-based treatment, care and support. However, return to the workplace is not always possible. Post-occupational surveillance should be provided in some cases