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FACULTY OF NURSING

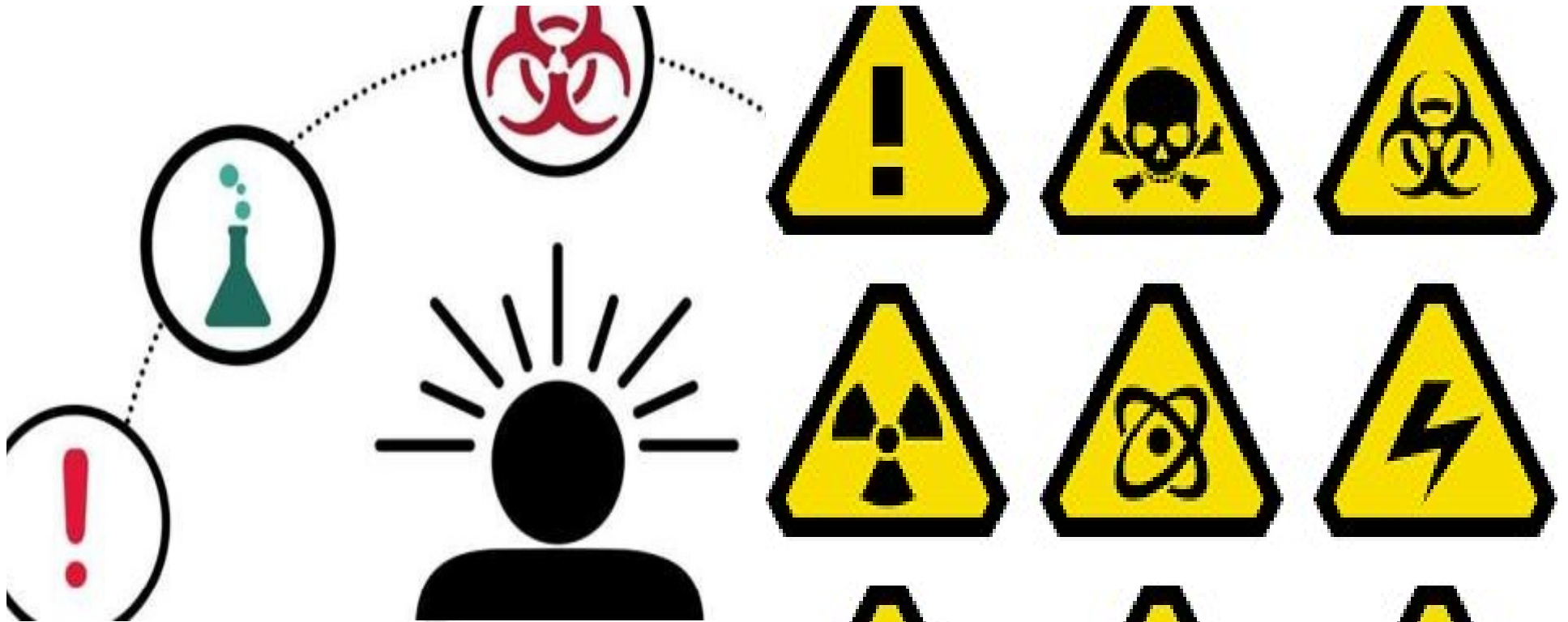


RAMA
UNIVERSITY

UNIT-10

**OCCUPATIONAL AND INDUSTRIAL HEALTH
DISORDER**

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OCCUPATIONAL HEALTH

WHO DEFINED OCCUPATIONAL HEALTH AS;

**‘THE PROMOTION AND MAINTENANCE OF THE
HIGHEST DEGREE OF PHYSICAL, MENTAL AND SOCIAL
WELL-BEING OF WORKERS IN ALL OCCUPATIONS**



WHAT IS OCCUPATIONAL HEALTH NURSING?

➤ **APPLICATION OF NURSING PRINCIPLES IN CONSERVING THE HEALTH OF WORKERS AT THE WORKPLACE.**

➤ **BASED ON PRINCIPLES OF RECOGNITION, PREVENTION AND TREATMENT OF ILLNESS, INJURIES.**

➤ **FORMALLY KNOWN AS 'INDUSTRIAL NURSING'**

AIMS OF OCCUPATIONAL HEALTH NURSING

- ❑ **PROMOTION AND MAINTENANCE OF THE HIGHEST DEGREE OF PHYSICAL, MENTAL AND SOCIAL WELL-BEING OF WORKERS IN ALL OCCUPATIONS ;**
- ❑ **BY PREVENTING- DEPARTURES FROM HEALTH CAUSED BY THEIR WORKING CONDITIONS,**
- ❑ **PROTECTING THE WORKERS IN THEIR EMPLOYMENT FROM RISKS RESULTING FROM FACTORS ADVERSE TO HEALTH AND ADAPTATION OF WORKERS TO THEIR**

JOBS



OBJECTIVES OF OCCUPATIONAL HEALTH

NURSING

- **MAINTENANCE AND PROMOTION OF WORKERS' HEALTH AND WORKING CAPACITY(HEALTH MONITORING)**
- **IMPROVEMENT OF WORKING ENVIRONMENT AND WORK TO BECOME CONDUCTIVE TO SAFETY AND HEALTH (WORKSITE VISITS)**
- **DEVELOPMENT OF WORK ORGANISATIONS AND WORKING CULTURES IN A DIRECTION, WHICH SUPPORTS HEALTH AND SAFETY AT WORK(HEALTH EDUCATION)**

OCCUPATIONAL HAZARDS

- 1. PHYSICAL HAZARDS**
- 2. CHEMICAL**
- 3. BIOLOGICAL**
- 4. PSYCHOSOCIAL**
 - a. PSYCHOLOGICAL AND BEHAVIORAL CHANGES.**
 - b. PSYCHOSOMATIC ILL-HEALTH**



1. PHYSICAL HAZARDS

**HEAT – DIRECT & INDIRECT EFFECT OF HIGH TEMPERATURE,
RADIANT HEAT, HEAT STAGNATION.**

COLD – GENERAL & LOCAL COLD INJURY

**LIGHT – ACUTE & CHRONIC EFFECT OF BRIGHT & DIM LIGHT &
GLARE.**

RADIATION

**a. IONIZING-X-RAYS,GAMMA RAYS,BETA PARTICLES, ALPHA
PARTICLES**

b. NON-IONIZING - MICROWAVES, INFRARED, AND ULTRA-

VIOLET LIGHT

NOISE – AUDITORY & NON AUDITORY EFFECT.

VIBRATION – HAZARDOUS IN THE FREQUENCY RANGE OF 10- 500HZ

DISEASES DUE TO PHYSICAL AGENTS

HEAT – HEAT STROKE, HEAT RASH.

LIGHT – OCCUPATIONAL CATARACT

COLD – HYPOTHERMIA, FROST BITE

VIBRATION – OSTEOARTHRITIS

NOISE – OCCUPATIONAL DEAFNESS

RADIATION- CANCER

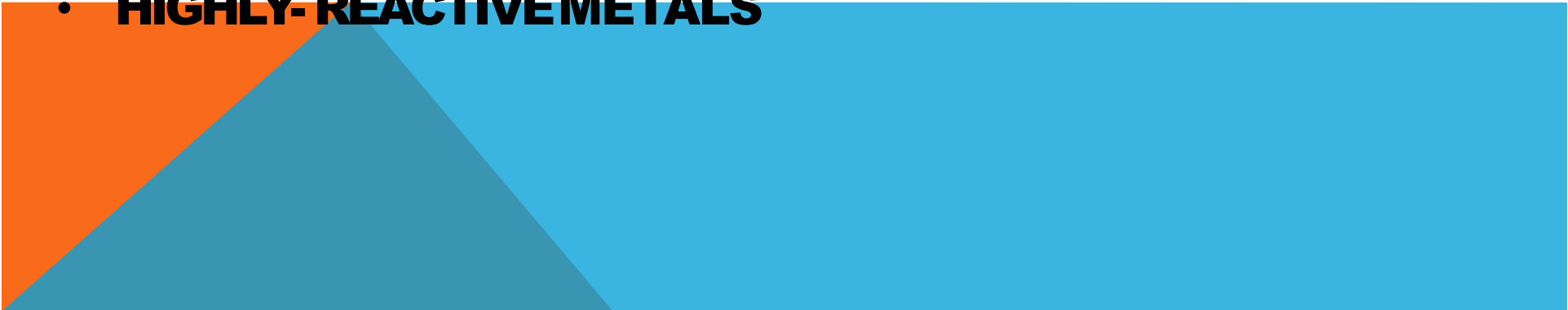


Frostbite



Exposure to a temperature below freezing leads to severe soft tissue damage.

2. CHEMICAL HAZARDS:-

- **ACIDS**
 - **BASES**
 - **HEAVY METALS –LEAD**
 - **SOLVENTS – PETROLEUM**
 - **PARTICULATES – ASBESTOS, SILICA AND OTHER FINE
DUST/FIBROUS MATERIALS**
 - **FUMES – NOXIOUS GASES/VAPORS**
 - **HIGHLY-REACTIVE METALS**
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DISEASES DUE TO CHEMICAL AGENTS

- **GASES – GASPOISONING.**
- **INORGANIC DUSTS:**
 - **COAL DUST - ANTHRACOSIS**
 - **SILICA - SILICOSIS**
 - **ASBESTOS - ASBESTOSIS**
 - **IRON - SIDEROSIS**
- **ORGANIC DUSTS:**
 - **CANE FIBER - BAGASSOSIS.**
 - **COTTON DUST - BYSSINOSIS.**
 - **HAY OR GRAIN DUST - FARMER'S LUNG.**
- **CHEMICALS – BURNS, DERMATITIS, CANCER, RESPIRATORY ILLNESS**
- **METALS – LEAD, MERCURY, ARSENIC, CHROMIUM CAUSE POISONING**

PNEUMOCONIOSES:-

IT IS A OCCUPATIONAL LUNG DISEASE CAUSED BY INHALATION OF DUST.

TYPES:-

- ⊖ **COAL WORKER PNEUMOCONIOSES**
 - ⊖ **ASBESTOSIS**
 - ⊖ **SILICOSIS**
 - ⊖ **BAUXITE FIBROSIS-IT IS A FORM OF PNEUMOCONIOSES CAUSED BY BAUXITE**
 - ⊖ **BERYLLIOSIS-BERYLLIUM**
 - ⊖ **SIDEROSIS-IRON**
 - ⊖ **BYSSINOSIS -COTTON**
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COAL WORKERS' PNEUMOCONIOSIS - BLACK LUNG DISEASE - EXPOSURE TO PARTICLES OF CARBON

WHEN COAL DUST IS INHALED FOR A LONG PERIOD OF TIME, IT BUILDS UP IN THE LUNGS, WHICH THE BODY IS NOT ABLE TO REMOVE - INFLAMMATION OF THE LUNGS - FIBROSIS - CAUSES LARGE SIZE CAVITIES IN THE LUNGS.



Healthy Tissue.

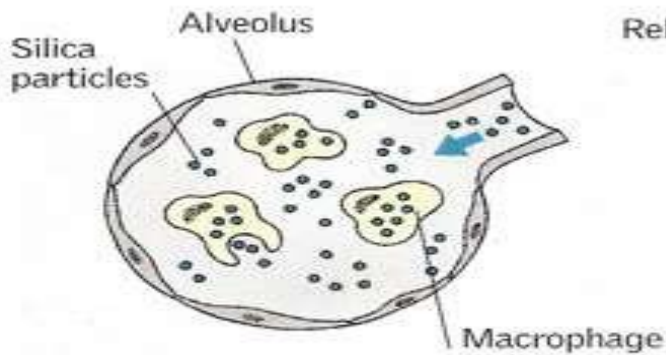
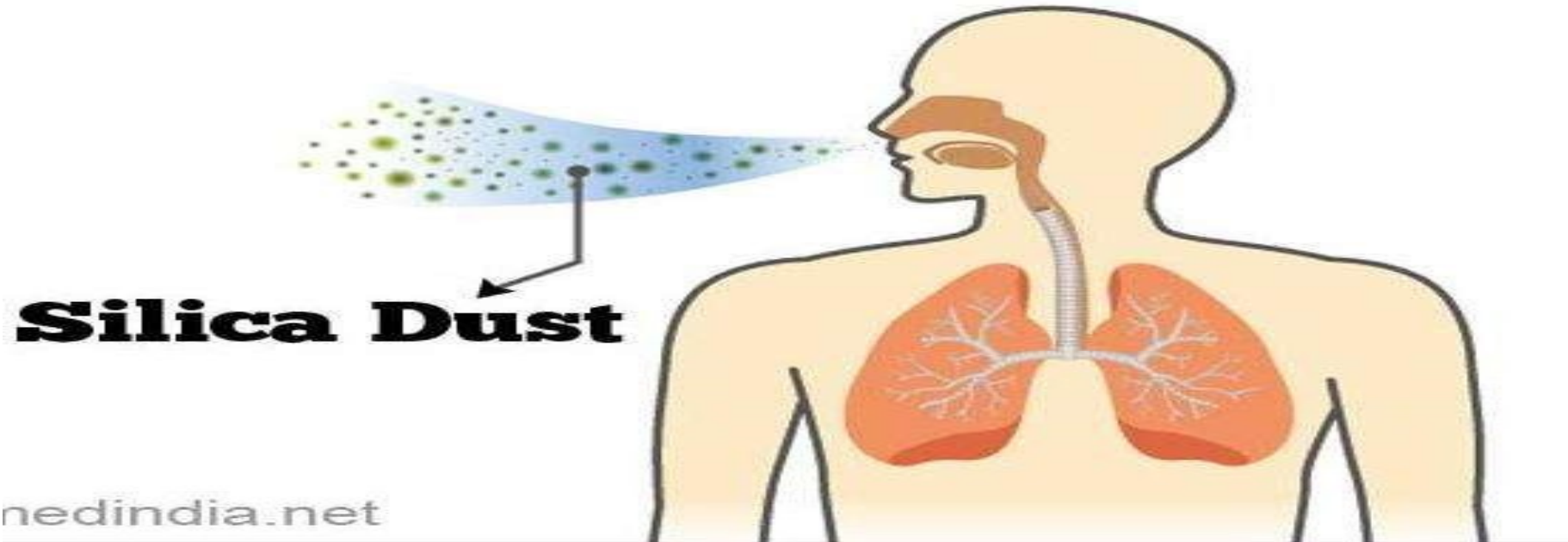


Healthy Tissue
90-year-old
schoolteacher

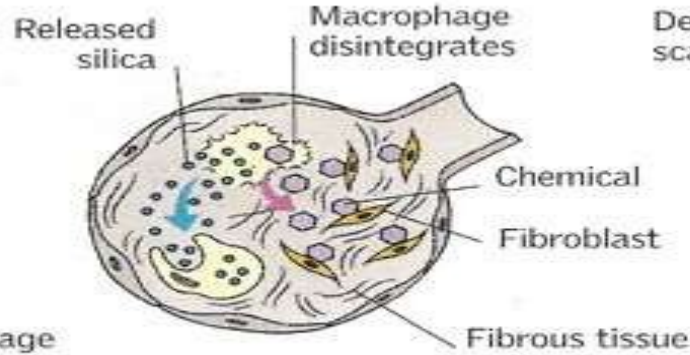


Progressive
massive fibrosis
40-year-old-miner

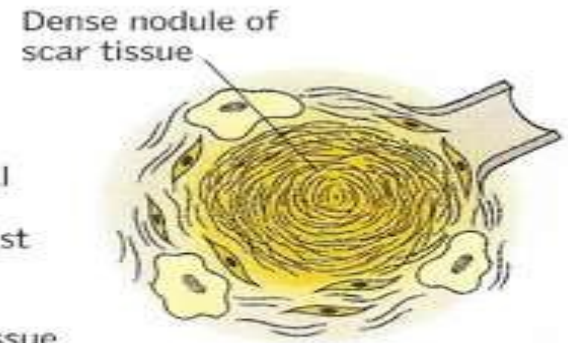
SILICOSIS:- LUNG FIBROSIS CAUSED BY THE INHALATION OF DUST CONTAINING SILICA



Silica dust inhaled



Fibrous tissue develops



Scarring of lungs

BERYLLIOSIS OR CHRONIC BERYLLIUM DISEASE

(CBD):-

IT IS A CHRONIC ALLERGIC-TYPE LUNG RESPONSE AND CHRONIC LUNG DISEASE CAUSED BY EXPOSURE TO BERYLLIUM AND ITS COMPOUNDS, A FORM OF BERYLLIUM POISONING

SIDEROSIS (WELDER'S DISEASE):- IT IS THE DEPOSITION OF EXCESS IRON IN BODY TISSUE



**ANTHRACOSIS :- IT'S A TYPE OF PNEUMOCONIOSIS AS
CAUSED BY THE ACCUMULATION OF CARBON IN THE
LUNGS DUE TO REPEATED EXPOSURE TO AIR
POLLUTION OR INHALATION OF COAL DUST
PARTICLES”**

**FARMER'S LUNG IS A DISEASE CAUSED BY AN
ALLERGY TO THE CERTAIN CROPS. FARMERS ARE
MOST LIKELY TO GET IT BECAUSE IT'S USUALLY
CAUSED BY BREATHING IN DUST FROM HAY, CORN,
GRASS FOR ANIMAL FEED, GRAIN, TOBACCO, OR SOME
PESTICIDES.**

ASBESTOSIS:-

ASBESTOSIS (AS-BES-TOE-SIS) IS A CHRONIC LUNG DISEASE CAUSED BY INHALING ASBESTOS FIBERS.

PROLONGED EXPOSURE TO THESE FIBERS CAN CAUSE LUNG TISSUE SCARRING AND SHORTNESS OF BREATH.

ASBESTOSIS SYMPTOMS CAN RANGE FROM MILD TO SEVERE, AND USUALLY DON'T APPEAR UNTIL MANY YEARS AFTER CONTINUED EXPOSURE.

ASBESTOS IS A NATURAL MINERAL PRODUCT THAT'S RESISTANT TO HEAT AND CORROSION. IT WAS USED IN PRODUCTS SUCH AS CEMENT AND SOME FLOOR TILES.

REDUCING EXPOSURE TO ASBESTOS IS THE BEST PREVENTION AGAINST ASBESTOSIS

Bagassosis

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- Inhalation of bagasse sugar cane dust containing thermophilic actinomycete, *thermoactinomyces sacchari*
- Symptoms:
 - Breathlessness, cough, haemoptysis, and slight fever.
- Occupational exposure:
 - Manufacturing of paper, cardboard and rayon.



Byssinosis

- Byssinosis:
 - Caused by inhalation of cotton fibre dust
 - The chief symptoms are
 - Chest tightness
 - Shortness of breath
 - Cough and
 - Wheezing
 - Typically occurring when patients return to work after a weekend or vacation.
 - Smoking significantly exacerbates byssinosis



3. BIOLOGICAL HAZARDS

BACTERIA VIRUSES

FUNGI

INSECTS – MOSQUITOES

ANIMALS



DISEASES DUE TO BIOLOGICAL AGENTS

HEPATITIS B VIRUS

HEPATITIS C VIRUS

TUBERCULOSIS



4. PSYCHOSOCIAL HAZARDS

**WORK-RELATED STRESS – EXCESSIVE WORKING TIME
AND OVERWORK**

VIOLENCE – FROM OUTSIDE THE ORGANIZATION

BULLYING – EMOTIONAL AND VERBAL ABUSE

SEXUAL HARASSMENT

MOBBING

BURNOUT

EXPOSURE TO UNHEALTHY ELEMENTS – TOBACCO,

UNCONTROLLED ALCOHOL



DISORDERS DUE TO PSYCHOSOCIAL HAZARDS

MUSCULOSKELETAL DISORDERS (MSDS)

•CAN AFFECT THE BODY'S MUSCLES, JOINTS, TENDONS, LIGAMENTS AND NERVES. AS WELL AS THE BACK, NECK, SHOULDERS AND UPPER LIMBS; LESS OFTEN THEY AFFECT THE LOWER LIMBS.

○**DEPRESSION**

○**DISCOURAGEMENT**

○**ANXIETY**

○**MEMORY LOSS**

○**DISSATISFACTION**

○**FRUSTRATION & IRRITABILITY**


- **PREVENTION METHODS SUCH AS PERIODIC MEDICAL METHODS EXAMINATIONS, PREPLACEMENT, WORKING ENVIRONMENT SUPERVISION AND HEALTH EDUCATION. NOTIFICATION, MAINTENANCE AND ANALYSIS OF RECORDS, AND COUNSELLING ARE ALSO STEPS TOWARDS PREVENTION.**
- **ENGINEERING MEASURES SUCH AS PROPER DESIGN OF PLANT, VENTILATION, DUST ISOLATION THROUGH ENCLOSURE AND ISOLATION, AND PROTECTIVE DEVICES.**
- **LEGISLATIVE PROTECTION LIKE THE FACTORIES ACT OF 1948 AND THE EMPLOYEES STATE INSURANCE ACT OF 1948.**

PREVENTION OF OCCUPATIONAL DISEASES MEASURES FOR HEALTH PROTECTION OF WORKERS.

1. NUTRITION

2. COMMUNICABLE DISEASE CONTROL

3. ENVIRONMENTAL SANITATION.

- WATER SUPPLY**
 - FOOD**
 - TOILET**
 - PROPER GARBAGE & WASTE DISPOSAL.**
 - GENERAL PLANT CLEANLINESS.**
 - SUFFICIENT SPACE.**
 - LIGHTING.**
 - VENTILATION.**
 - PROTECTION AGAINST HAZARDS.**
- 

4. MENTAL HEALTH:

GOALS:

TO PROMOTE HEALTH AND HAPPINESS OF WORKERS.

TO DETECT SIGNS OF STRESS AND STRAIN AND TAKE NECESSARY MEASURES.

TREATMENT OF EMPLOYEES SUFFERING FROM MENTAL ILLNESSES.

REHABILITATION OF THOSE WHO BECOME ILL

5. HEALTH EDUCATION.



PREVENTION OF OCCUPATIONAL DISEASE

PRIMARY PREVENTION

IS DESIGNED TO DETER OR AVOID THE OCCURRENCE OF DISEASE OR INJURY

SECONDARY PREVENTION

IS DESIGNED TO IDENTIFY AND ADEQUATELY TREAT A DISEASE OR INJURY PROCESS AS SOON AS POSSIBLE, OFTEN BEFORE ANY SYMPTOMS HAVE DEVELOPED

TERTIARY PREVENTION

IS DESIGNED TO TREAT A DISORDER WHEN IT HAS ADVANCED BEYOND ITS EARLY STAGES, TO AVOID COMPLICATIONS & LIMIT DISABILITY, TO ADDRESS REHABILITATIVE AND PALLIATIVE NEEDS



Thank You!

