PATIENT AND EMPLOYEE SAFETY

INFECTION CONTROL

IMPORTANCE OF INFECTION CONTROL

- MAIN GOAL IS TO PREVENT SPREAD OF INFECTIOUS DISEASES
- INFECTIOUS DISEASES = ANY DISEASE CAUSED BY THE GROWTH OF PATHOGENS, DISEASE-CAUSING MICROORGANISMS (GERMS), IN THE BODY
- INFECTION CAN BE GENERALIZED/SYSTEMIC (AFFECTING WHOLE BODY) OR LOCALIZED (AFFECTING ONE AREA OF BODY)

CHAIN OF INFECTION

- INFECTIOUS AGENT: PATHOGEN MUST BE PRESENT
- RESERVOIR HOST: PATHOGEN MUST HAVE A PLACE TO LIVE AND GROW
- PORTAL OF EXIT: PATHOGEN MUST BE ABLE TO ESCAPE FROM RESERVOIR HOST WHERE IT HAS BEEN GROWING
- ROUTE OF TRANSMISSION: WHEN PATHOGEN LEAVES RESERVOIR HOST THROUGH PORTAL OF EXIT, IT MUST HAVE WAY OF TRANSMISSION TO NEW HOST
- PORTAL OF ENTRY: PATHOGEN MUST HAVE A WAY OF ENTERING A NEW HOST
- SUSCEPTIBLE HOST: INDIVIDUAL WHO HAS A LARGE NUMBER OF PATHOGENS INVADING THE BODY OR DOESN'T HAVE ADEQUATE RESISTANCE TO INVADING PATHOGEN

REGULATORY AGENCIES

- CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
  - GOVERNMENT AGENCY THAT IS PART OF US DEPT OF HEALTH AND HUMAN SERVICES
    - FORMULATES SAFETY GUIDELINES TO HELP PREVENT AND CONTROL THE SPREAD OF INFECTIOUS DISEASES

- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
  - GOVERNMENT AGENCY UNDER DEPT OF LABOR
    - ESTABLISHES MINIMUM HEALTH AND SAFETY STANDARDS FOR WORKPLACE AND ENFORCES THOSE STANDARDS

PREVENTION THROUGH ASEPSIS

- METHODS USED TO MAKE PATIENT, WORKER, AND ENVIRONMENT AS PATHOGEN-FREE AS POSSIBLE
- 2 TYPES: MEDICAL AND SURGICAL
  - MEDICAL – CLEAN TECHNIQUE
    - INCLUDES PROCEDURES TO DECREASE NUMBER AND SPREAD OF PATHOGENS IN ENVIRONMENT (I.E., HANDWASHING, HYGIENE)
  - SURGICAL – STERILE TECHNIQUE
    - INCLUDES PROCEDURES TO COMPLETELY ELIMINATE PRESENCE OF PATHOGENS FROM OBJECTS AND AREAS (STERILIZATION)

BREAKING THE CHAIN OF INFECTION

- DECREASING SOURCE OF MICROORGANISMS
  - PERFORM PROPER HANDWASHING
  - DECONTAMINATE SURFACES AND EQUIPMENT
    - ANTISEPTICS, DISINFECTANTS, STERILIZATION
  - AVOID CONTACT WITH PATIENTS AND OTHERS WHEN HARBORING INFECTIOUS MICROORGANISMS

- PREVENTING TRANSMISSION OF MICROORGANISMS
  - WEAR PPE
  - FOLLOW ISOLATION PROCEDURES WHEN INDICATED

BREAKING THE CHAIN OF INFECTION

- MAXIMIZE RESISTANCE OF HOST
  - PROVIDE GOOD HYGIENE
  - ENSURE PROPER NUTRITION, FLUID INTAKE, AND SLEEP
  - DECREASE STRESSORS THAT WEAKEN IMMUNE RESPONSE

STANDARD PRECAUTIONS

- WASH HANDS WHEN DOING THE FOLLOWING:
  - COMING ON DUTY
  - TAKING A BREAK OR LEAVING WORK
  - BETWEEN PATIENT CONTACTS
  - BEFORE APPLYING AND IMMEDIATELY UPON REMOVING GLOVES
  - BEFORE AND AFTER TOUCHING YOUR FACE IN ANY WAY
  - AFTER CONTACT WITH ANYTHING CONSIDERED CONTAMINATED
  - BEFORE TOUCHING ANYTHING CLEAN
  - BEFORE AND AFTER EATING, DRINKING, OR USING RESTROOM

PROTECTING AGAINST INFECTION

- GLOVES
  - CHANGE BETWEEN TASKS AND PROCEDURES
  - WEAR GLOVES WHEN WORKING WITH PATIENTS
- PATIENT-CARE EQUIPMENT
  - MAKE SURE IT IS CLEANED AND REPROCESSED APPROPRIATELY BEFORE PATIENT USE
- LINEN
  - USE GLOVES AND PREVENT USED LINENS FROM TOUCHING SKIN OR YOUR CLOTHING

BACTERIOSTATIC VS. BACTERIOCIDAL

- BACTERIOSTATIC – INHIBITS THE GROWTH OF MICROORGANISM
  - ANTISEPTICS – MILD ENOUGH FOR USE ON SKIN
  - DISINFECTANTS – DESTROY MOST BACTERIA AND VIRUSES

- BACTERIOCIDAL (GERMICIDAL) – KILLS MICROORGANISMS
  - STERILIZATION – TOTALLY DESTROYS ALL MICROORGANISMS, INCLUDING VIRUSES AND SPORES; AUTOCLAVING

CLEANING IN THE SLEEP LAB

- CLEANING AND DISINFECTING REUSABLE EQUIPMENT IS SAFETY STANDARD THAT CAN'T BE COMPROMISED
- MEDICAL EQUIPMENT FALLS INTO 3 CATEGORIES FOR DISINFECTION AND STERILIZATION: CRITICAL, SEMICRITICAL, AND NONCRITICAL
- PPE IS REQUIRED BY OSHA WHILE CLEANING EQUIPMENT TO REDUCE EXPOSURE TO HAZARDOUS CHEMICALS

SEMICRITICAL

- REQUIRES HIGH-LEVEL DISINFECTION, IN SEPARATE CLEANING AREA, WITH WET PASTEURIZATION OR CHEMICAL DISINFECTANT
- CPAP MASKS FALL INTO THIS CATEGORY
- TUBERCULOCIDAL DISINFECTANT MUST BE INCLUDED
- FDA-APPROVED SEMICRITICAL METHODS OF DISINFECTION:
  - GLUTARALDEHYDE
  - HYDROGEN PEROXIDE
  - ORTHO-PHTHALALDEHYDE
  - PERACETIC ACID WITH HYDROGEN PEROXIDE
- EXAMPLES: CONTROL III ELITE, CAVICIDE, SANIZIDE PLUS, AND CIDEX OPA

NONCRITICAL

- MAY DISINFECTED WHERE THEY ARE USED AND DON'T NEED TRANSPORTED TO CENTRAL PROCESSING AREA
- LITTLE RISK OF TRANSMITTING INFECTIONS DUE TO NO CONTACT WITH MUCOUS MEMBRANES
- LOW-LEVEL DISINFECTANT OR GERMICIDAL MAY BE USED

- LOW-LEVEL DISINFECTANTS:
  - ISOPROPYL ALCOHOL (70-90%)
  - SODIUM HYPOCHLORITE (5.25-6.15%) DILUTED WITH WATER AT 1:500
- GERMICIDALS:
  - CONTROL III
  - SANI-CLOTH HB WIPE
  - SUPER SANI-CLOTH WIPE
  - SANI-CLOTH PLUS

NONCRITICAL

- NONCRITICAL ITEMS IN THE SLEEP LAB:
  - WORK SURFACES
  - BED RAILS
  - EEG ELECTRODES
  - THERMAL AIRFLOW SENSORS
  - HEAD STRAPS
  - SNORE MICROPHONES
  - BELTS

HOW TO PROPERLY CLEAN SLEEP LAB EQUIPMENT

- EEG ELECTRODES
  - RINSE WITH WARM WATER. SOAK IN GENERAL DISINFECTANT. AIR DRY.
- SNAP ELECTRODES, AIRFLOW SENSORS
  - WIPE USING CLOTH SOAKED IN SOLUTION OF LOW-LEVEL DISINFECTANT OR WIPE WITH DISINFECTANT TOWELETTE NOT CORROSIVE TO METAL OR PLASTIC. AIR DRY.
- BELTS
  - STRAPS MAY BE SAFELY SOAKED IN LOW-LEVEL DISINFECTANT SOLUTION. AIR DRY.
  - WIRE-SET MAY BE WIPED WITH DISINFECTING CLOTH OR TOWELETTE. DO NOT IMMERSE IN LIQUID.

HOW TO PROPERLY CLEAN SLEEP LAB EQUIPMENT

- BODY POSITION SENSOR, SNORE MICROPHONE, SPO2 SENSOR
  - WIPE USING A CLOTH WITH A LOW-LEVEL DISINFECTING AGENT OR TOWELETTE THAT IS NOT CORROSIVE TO METAL OR PLASTIC. DO NOT IMMERSE IN LIQUID. AIR DRY.
- HEADGEAR
  - SHOULD NOT BE DISINFECTED. WASH WITH WARM WATER AND PURE SOAP BETWEEN PATIENTS
- CPAP MASKS
  - SOAK IN MODERATE- TO HIGH-GRADE DISINFECTANT
- LINENS
  - BLANKETS, SHEETS, PILLOWCASES MUST BE WASHED BETWEEN PATIENTS

WORKPLACE SAFETY

BODY MECHANICS

BODY MECHANICS

- PROPER BODY MECHANICS LIMITS INJURY
- BEST PREVENTATIVE PRACTICES:
  - USE GOOD POSTURE
  - STAY FIT AND TRIM
  - MAINTAIN FLEXIBILITY
  - REDUCE MENTAL STRESS
- BODY MECHANICS = CORRECT POSITIONING OF THE BODY FOR A GIVEN TASK
- ERGONOMICS = SCIENCE OF DESIGNING AND ARRANGING THINGS IN WORKING AND LIVING ENVIRONMENTS FOR MAX EFFICIENCY, HEALTH AND SAFETY

GENERAL GUIDELINES

- TASKS THAT MAY CAUSE INJURIES IN SLEEP LAB:
  - SOMETIMES YOU WILL HAVE TO HELP PATIENTS WITH LIMITED MOBILITY TO GET IN AND OUT OF BED
  - SITTING AND WORKING AT THE COMPUTER FOR LONG PERIODS
- REPETITIVE MOTION INJURIES (RMIS) INVOLVE OVERUSE OF ONE PART OF THE BODY THAT PLACES UNDUE STRESS ON THAT AREA
  - RECOVERY FROM RMIS CAN TAKE DAYS TO MONTHS
  - PROGNOSIS FOR RECOVERY DEPENDS ON THE SPECIFIC DISORDER, DEGREE OF DAMAGE, AND PATIENT'S COMPLIANCE WITH RECOMMENDED EXERCISES AND ACTIVITY

COMPUTERS AND ERGONOMICS

- EXTENSIVE USE OF MOUSE HAS BEEN SHOWN TO BE MAJOR CONTRIBUTOR TO RMIS
  - KEEP WITHIN EASY REACH

- VISUAL DISCOMFORT FROM STARING AT THE SCREEN
  - EYE STRAIN AND HEADACHES COMMON PROBLEMS
  - EYES TIRE FASTER WHEN LOOKING AT COMPUTER SCREEN THAN READING PRINTED MATERIALS

ENVIRONMENTAL SAFETY

MOVING SAFELY

- NEVER RUN
- STAY TO THE RIGHT IN HALLWAYS
- REMOVE ANY LOOSE RUGS FROM FLOORS
- OPEN DOORS SLOWLY
- USE HANDRAILS WHEN USING THE STAIRS
- NEVER CARRY UNCAPPED SYRINGES OR SHARP INSTRUMENTS IN HALLWAYS OR BETWEEN ROOMS

DRESSING FOR SAFETY

- WEAR LONG HAIR TIED BACK OR UP
- DO NOT WEAR EARRINGS THAT EXTEND BEYOND THE EARLOBE
- WEAR ENCLOSED SHOES
- LIMIT JEWELRY TO A SMOOTH WEDDING BAND
- KEEP FINGERNAILS SHORT

WORKING SAFELY WITH PATIENTS

- DO NOT PERFORM ANY PROCEDURE ON PATIENTS UNTIL ADEQUATELY TRAINED
- OBSERVE AND NOTE CONDITIONS IN PATIENTS THAT MIGHT INCREASE THEIR RISK OF ACCIDENT OR INJURY
- BE POSITIVE YOU HAVE THE CORRECT PATIENT
- VERIFY THE PATIENT HAS GIVEN CONSENT
- OBSERVE PATIENTS CLOSELY AND REPORT ANY CHANGES IMMEDIATELY
- KEEP YOUR WORK AREA CLEAN, DRY AND ORGANIZED

PROTECTING YOURSELF AND OTHERS

- DO NOT OPEN MORE THAN ONE FILE CABINET DRAWER AT A TIME
- DO NOT LEAVE CABINET DOORS OPEN
- DO NOT PLACE FOOD IN A REFRIGERATOR DESIGNATED FOR LAB SPECIMENS OR MEDICATIONS
- DO NOT WEAR UNIFORMS IN NON-WORK SETTINGS
- KEEP FLOORS CLEAR

REPORTING FOR SAFETY

- REPORT ANY UNSAFE CONDITIONS IMMEDIATELY
- REPORT ANY ACCIDENTS OR INJURIES IMMEDIATELY AND COMPLETE AN INCIDENT REPORT

WORKPLACE VIOLENCE

- VIOLENT ACTS DIRECTED TOWARD PERSONS AT WORK OR ON DUTY
- MOST COMMON IS PATIENT AGGRESSION TOWARD CAREGIVERS
- CAN BE PHYSICAL OR VERBAL ABUSE
- RANGES FROM OFFENSIVE OR THREATENING LANGUAGE TO HOMICIDE

FIRE HAZARDS

- STAY CALM DURING EMERGENCIES
- IF SAFETY IS AT RISK, LEAVE THE AREA AND SOUND THE ALARM.
- IF FIRE IS SMALL AND CONTAINED AND IT IS SAFE TO DO SO, DETERMINE WHICH EXTINGUISHER TO USE AND PROCEED WITH THE PROPER PROCEDURE.
- FIRE REQUIRES 3 THINGS TO START: OXYGEN, FUEL, HEAT

FIRE HAZARDS

- MUST BE KNOWLEDGEABLE IN:
  - LOCATION OF FIRE ALARMS AND EXTINGUISHERS
  - HOW TO USE A FIRE EXTINGUISHER
    - PASS
      - PULL THE PIN
      - AIM THE NOZZLE AT THE BASE OF THE FIRE
      - SQUEEZE THE HANDLE
      - SWEEP BACK AND FORTH ALONG THE BASE OF THE FIRE
- HOW TO RESPOND TO EACH TYPE OF FIRE
  - FIRE EXTINGUISHERS VARY FOR DIFFERENT TYPES OF FIRE
- EMERGENCY EVACUATION ROUTES

FIRE HAZARDS

- MUST BE KNOWLEDGEABLE IN:
  - WHAT PROCEDURES TO FOLLOW
    - RACE
      - REMOVE PATIENTS
      - ACTIVATE ALARM
      - CONTAIN THE FIRE
      - EXTINGUISH THE FIRE OR EVACUATE THE AREA

ELECTRICAL HAZARDS

- BE THOROUGHLY FAMILIAR WITH EQUIPMENT BEFORE ATTEMPTING TO USE IT INDEPENDENTLY FOR FIRST TIME
- REVIEW AND FOLLOW MANUFACTURER'S OPERATING INSTRUCTIONS
- IF DAMAGE IS NOTED, DO NOT USE EQUIPMENT AND REPORT IT TO PROPER PERSON FOR REPAIR
- NEVER USE ELECTRICAL CORDS NOT COMPLETELY INTACT, PLUGS THAT HAVE BEEN ALTERED, OR EXCESSIVE FORCE TO INSERT A PLUG INTO AN OUTLET

ELECTRICAL HAZARDS

- NEVER HANDLE ELECTRICAL EQUIPMENT AROUND WATER

- IF SOMEONE IS BEING SHOCKED, DO NOT TOUCH THE PERSON OR PULL THE PLUG FROM THE WALL. INSTEAD, TURN OFF MAIN SOURCE OF POWER IMMEDIATELY AND BE PREPARED TO ADMINISTER EMERGENCY CARE AND CALL FOR HELP

SAFETY TIPS FOR POWER CORDS

- REPLACE CUT OR DAMAGED CORDS
- NEVER UNPLUG CORD BY PULLING THE CORD
- IF CORD OR PLUG IS WARM OR HOT, UNPLUG IMMEDIATELY
- CHECK WIRES, CORDS AND ELECTRICAL EQUIPMENT FOR SIGNS OF WEAR
- NEVER PLACE CORDS ACROSS TRAFFIC AREAS OR UNDER A CARPET
- NEVER BEND OR REMOVE THE GROUND (3RD PRONG ON PLUG). IT IS DESIGNED TO HELP PREVENT SHOCK.

CHEMICAL HAZARDS

- CAN CAUSE HARM IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN OR MUCOUS MEMBRANES

- MATERIAL SAFETY DATA SHEETS MUST BE AVAILABLE TO ALL EMPLOYEES
  - INCLUDES PRECAUTIONS TO TAKE WHEN HANDLING THE CHEMICAL, SAFETY INSTRUCTIONS FOR USE, REQUIREMENTS FOR CLEAN UP AND DISPOSAL, AND FIRST AID MEASURES TO TAKE IF EXPOSURE OCCURS

CHEMICAL HAZARDS

- MATERIAL SAFETY DATA SHEETS USED FOR FOLLOWING PRODUCTS IN SLEEP LAB:
  - CONDUCTIVE PASTE OR CREAM
  - DISINFECTANT/CLEANER CONCENTRATE
  - GERMICIDAL DEODORIZING CLEANER
  - ABRASIVE SKIN PREP GEL
  - ADHESIVE TO SECURE ELECTRODES
  - ALCOHOL PREP PADS
  - DIAPHORETIC SKIN PREP

CHEMICAL HAZARDS

- IF CONTAINER NOT PROPERLY LABELED OR CANNOT BE READ CLEARLY, DO NOT USE IT
- RECHECK LABELS AT LEAST 3 TIMES
- NEVER MIX 2 CHEMICALS TOGETHER WITHOUT FIRST VERIFYING COMPATIBILITY
- AVOID CONTACT WITH EYES AND SKIN AND DON'T INHALE
- TAKE PRECAUTIONS NOT TO SPLASH OR SPILL SOLUTIONS

CHEMICAL HAZARDS

- WEAR PPE AS INDICATED
- MAKE SURE CHEMICALS ARE USED ONLY FOR INTENDED PURPOSE
- STORE CHEMICALS AS DIRECTED ON LABELS
- DO NOT POUR TOXIC, FLAMMABLE, FOUL-SMELLING, OR IRRITATING CHEMICALS DOWN THE DRAIN
- IF YOU SPILL ANY SOLUTIONS, CLEAN UP IMMEDIATELY

CHEMICAL HAZARDS

- IF CHEMICAL COMES IN CONTACT WITH SKIN, RINSE UNDER COOL WATER FOR AT LEAST 5 MINUTES
- SPLASHES IN EYE SHOULD BE RINSED FOR MINIMUM OF 15 MINUTES, PREFERABLY WITH NORMAL SALINE
- REPORT ANY INCIDENTS IMMEDIATELY TO SUPERVISOR AND SEEK MEDICAL ASSISTANCE FOR EVALUATION AND FOLLOW UP

INFECTIOUS WASTE

- ANY ITEM OR PRODUCT THAT HAS THE POTENTIAL TO TRANSMIT DISEASE

- MUST BE HANDLED USING STANDARD AND TRANSMISSION-BASED PRECAUTIONS, PLACED IN CONTAINERS OR BAGS LABELED AS TO TYPE OF WASTE, DECONTAMINATED ON-SITE, OR REMOVED BY LICENSED REMOVAL FACILITY FOR DECONTAMINATION

OXYGEN HAZARDS

- NEVER USE FLAMMABLE LIQUIDS AROUND OXYGEN
- SECURE OXYGEN TANKS TO PREVENT THEM FROM FALLING OVER
- DO NOT PLACE OXYGEN IN SUNLIGHT OR NEAR HEAT
- SMOKING IS NOT ALLOWED WHEN OXYGEN IS IN USE
- USE COTTON BLANKETS, GOWNS OR CLOTHING. WOOL AND SYNTHETICS ARE MORE APT TO CAUSE STATIC ELECTRICITY

EMERGENCY ACTION PLAN

- OSHA REQUIRES THIS FOR HANDLING LARGE NUMBERS OF PATIENTS IN THE EVENT OF A CATASTROPHIC EVENT SUCH AS EARTHQUAKE, FLOOD, TORNADO, HURRICANE, OR BOMBING
- STAY CALM
- KNOW WHO IS IN CHARGE AND REPORT YOUR AVAILABILITY
- REPORT TO PERSON IN CHARGE AT REGULAR INTERVALS FOR FURTHER DIRECTIONS OR CHANGES IN ASSIGNMENTS
- IF UNSURE OF WHAT TO DO, ASK SOMEONE IN AUTHORITY
- COMMUNICATE CLEARLY AND BE COOPERATIVE
- USE TELEPHONES ONLY FOR OFFICIAL BUSINESS, NOT FOR PERSONAL CALLS

EMERGENCY ACTION PLAN

- WHAT SHOULD BE INCLUDED IN AN EAP:
  - PREFERRED METHOD FOR REPORTING FIRE AND EMERGENCIES
  - EVACUATION POLICY AND PROCEDURE
  - EMERGENCY ESCAPE PROCEDURES AND ROUTE ASSIGNMENTS
  - PROPER USE OF FIREFIGHTING EQUIPMENT
  - CONTACT LIST
  - PROCEDURES FOR EMPLOYEES PERFORMING CRITICAL TASKS
  - RESCUE AND MEDICAL DUTIES