

MEDAVIE

HealthEd

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THE WELL BEING OF THE PARAMEDIC

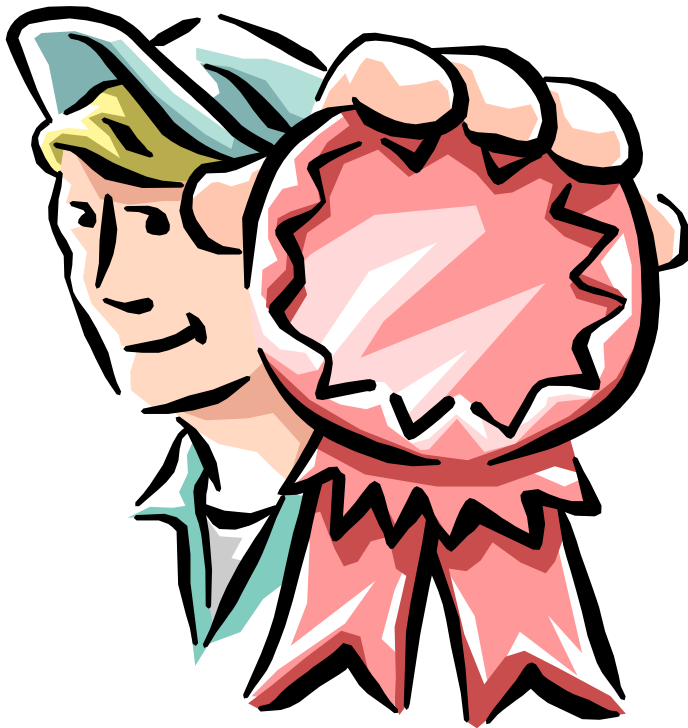
Advanced Care Paramedicine

Module: 01

Section: 02b

- Wellness of the Paramedic
- Impact of Shift Work on the Paramedic
- Proper Body Mechanics
- Managing Hostile Situations

- Well-being is a fundamental aspect of top-notch performance in EMS. It includes:
 - Physical well-being
 - Mental and emotional well-being
 - Safe lifting
- Seize the information about safe practice and apply it to your life.



- The benefits of physical fitness are well known:
 - Decreased resting heart rate and blood pressure
 - Increased oxygen-carrying capacity
 - Increased muscle mass and metabolism
 - Increased resistance to illness and injury
 - Enhanced quality of life

- Muscular Strength
- Cardiovascular Endurance
- Flexibility & Strength
- Nutrition & Weight control
- Disease Prevention
- Freedom from harmful habits and addictions
- Back safety



- Achieved with regular exercise
- Exercises may be isometric and isotonic
 - ISOMETRIC exercise is active exercise performed against stable resistance.
 - ISOTONIC exercise is active exercise during which muscles are worked through their range of motion

- Is a result of exercising at least three days a week vigorously enough to raise your pulse to its target heart rate.

Table 1-1

FINDING YOUR TARGET HEART RATE

1. Measure your resting heart rate. (You will use this number later.)
2. Subtract your age from 220. This total is your estimated maximum heart rate.
3. Subtract your resting heart rate from your maximum heart rate, and multiply that figure by 0.7.
4. Add the figure you just calculated to your resting heart rate.

EXAMPLE: In a 44-year-old woman whose resting heart rate is 52, maximum heart rate would be 176 ($220 - 44$). Maximum heart rate minus resting heart rate is 124 ($176 - 52$). Multiply 124 by 0.7 for a value of 86.8. Resting heart rate plus the calculated figure is 138.8 ($52 + 86.8$). Rounded up, this person's target heart rate is 140 beats per minute.

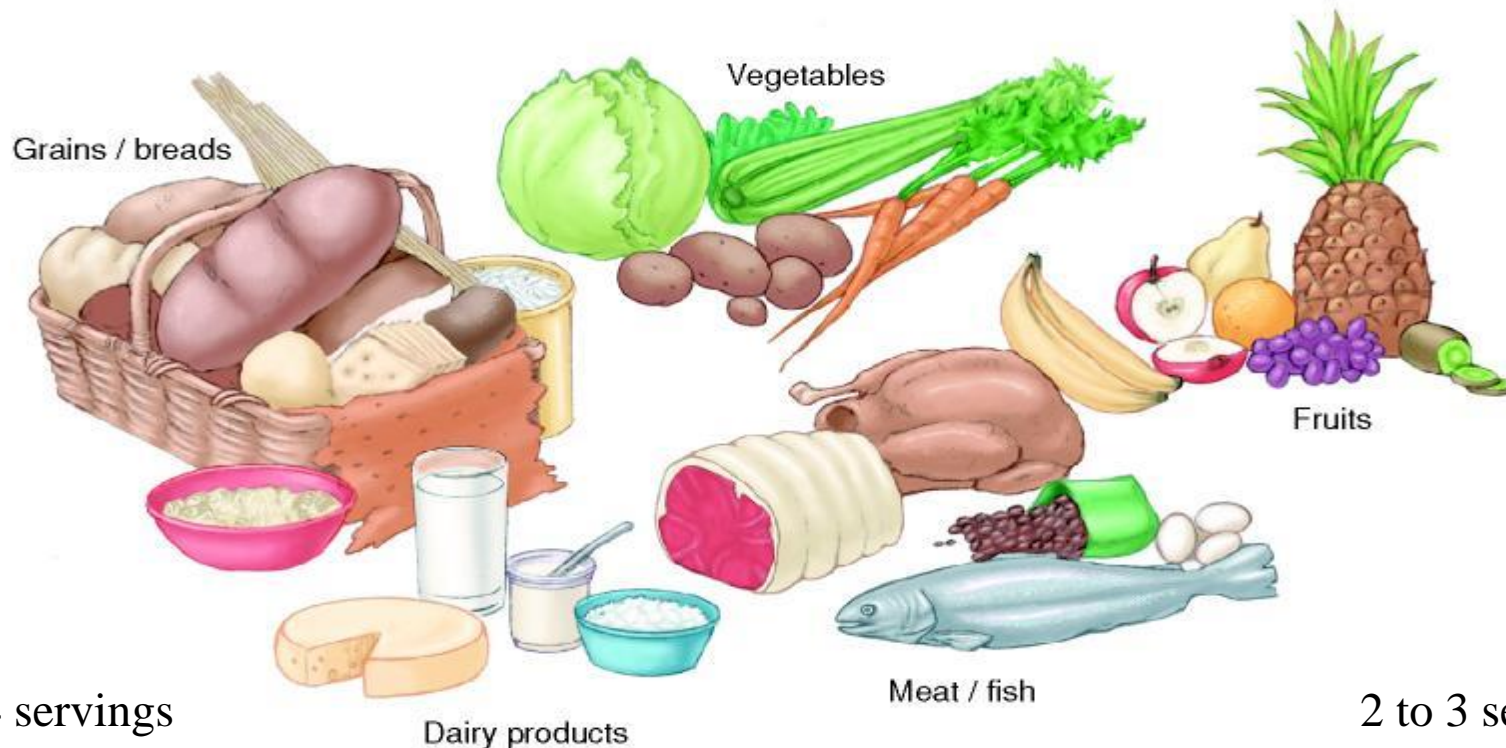
- A forgotten element of fitness
- Efficient use of muscles and joints requires adequate range of motion
- To achieve or regain flexibility, stretch main muscle groups regularly.
- Stretch daily.
- Never bounce when stretching.
- Hold a stretch for at least 60 seconds.

- It is a myth that people in EMS cannot maintain an adequate diet.
- The most difficult part is changing bad habits.
- Good nutrition is fundamental to well-being.

- Learn the major food groups and eat a variety of foods from them daily.

5 to 12 servings

5 to 10 servings



3 to 4 servings

2 to 3 servings

- Avoid or minimize intake of fat, salt, sugar, cholesterol, & caffeine.



- Check food labels for information about the nutritional content of the food you eat.

Serving size →

Number of servings per container →

Calories per serving →

Nutrients per serving as actual weight and as a % of daily diet

Nutrition Facts

Serving Size 8 fl oz (240 mL)
 Servings Per Container 8

Amount Per Serving

Calories 110 Calories from Fat 0

% Daily Value*

Total Fat 0g **0%**

Sodium 0mg **0%**

Potassium 450mg **13%**

Total Carbohydrate 26g **9%**

Sugars 22g

Protein 2g

Vitamin C 120% • Calcium 2%

Thiamin 10% • Niacin 4%

Vitamin B6 6% • Folate 15%

Not a significant source of saturated fat, cholesterol, dietary fiber, vitamin A and iron.

* Percent Daily Values are based on a 2,000 calorie diet.

- Eating “on the run” can be less detrimental if you plan ahead:
 - Avoid fast foods.
 - Carry a small cooler filled with whole-grain sandwiches, fruits, and vegetables.
 - Monitor your fluid intake.
 - Drink plenty of water.

- Exercise will:
 - Improve cardiovascular endurance
 - Help lower blood pressure
 - Help tip to the balance of body composition
- All are good measures against cardiovascular disease

- Proteins:
 - Utilized to help build, maintain and repair body tissues as well as other vital functions
- Carbohydrates:
 - Sugars used for energy
- Cholesterol:
 - A white waxy substance found in every cell and needed for normal body function. Cholesterol is manufactured in the liver and circulating levels are significantly affected by diet.

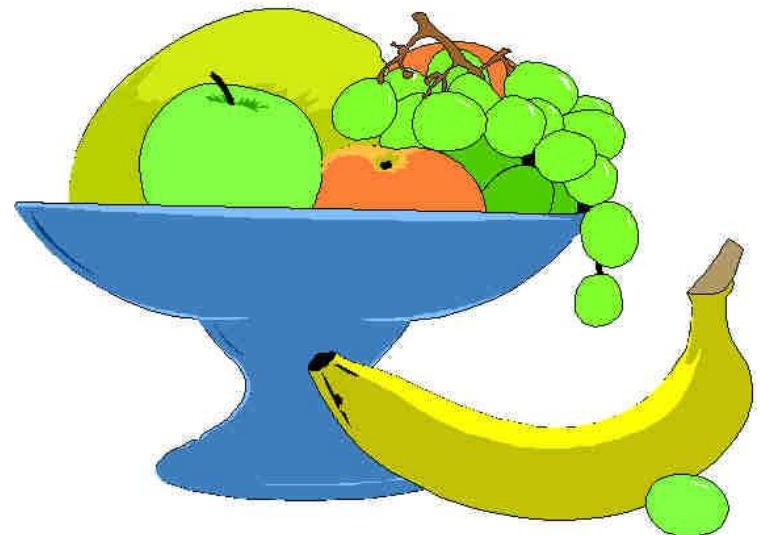
- Fats are classified as “saturated” and “unsaturated”
- Saturated:
 - “Bad” fats, they cause cholesterol levels to rise by shutting down the process that removes excess cholesterol
 - Found in meats and dairy products mainly
- Unsaturated:
 - “Good fats”, these help rid the body of newly formed cholesterol. Referred to as poly or monounsaturated fats
 - Found in olive, canola, sunflower and corn oil and others.
 - Omega-3 fatty acids also fall in this category which are found in fish
- Trans fats:
 - Although they are unsaturated their effects are similar to saturated fats – fried fast food

- Cholesterol travels through the body attached to lipoproteins, these proteins have different densities
- LDL “low density lipoproteins” carry cholesterol to the cells and cause blood vessel disease. This is the “bad cholesterol”
- HDL “high density lipoproteins” carry cholesterol to the liver, slowing down blood vessel damage

- To minimize chances for certain cancers:
 - Watch your diet.
 - High-fiber foods can help reduce the incidence of cancer.
 - Charcoal-cooked foods can increase the incidence of cancer.
 - Wear sun block, sunglasses, or a hat to protect against skin cancer.

- Many in high-stress jobs abuse substances such as nicotine and caffeine.
- Bad habits are rampant in EMS.
- Choose a healthier life and avoid overindulging in harmful substances.

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- Consider substance abuse programs, nicotine patches, or a 12-step program.
- The first step is always yours!



- EMS is a physically demanding career.
- Lifting and moving patients is frequently required.
- To avoid back injury, you must keep your back fit for the work you do.

- Correct Posture Will Minimize the Risk of Back Injury

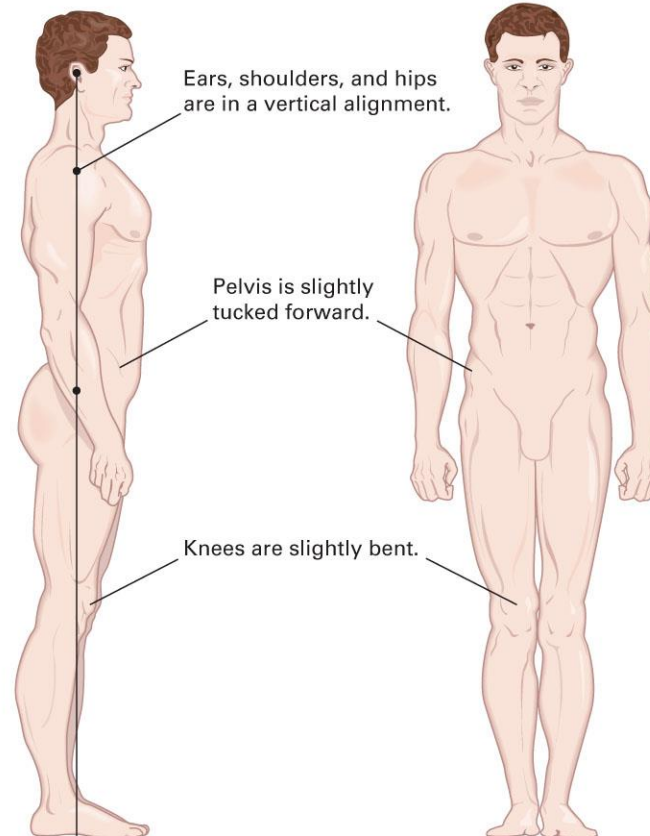
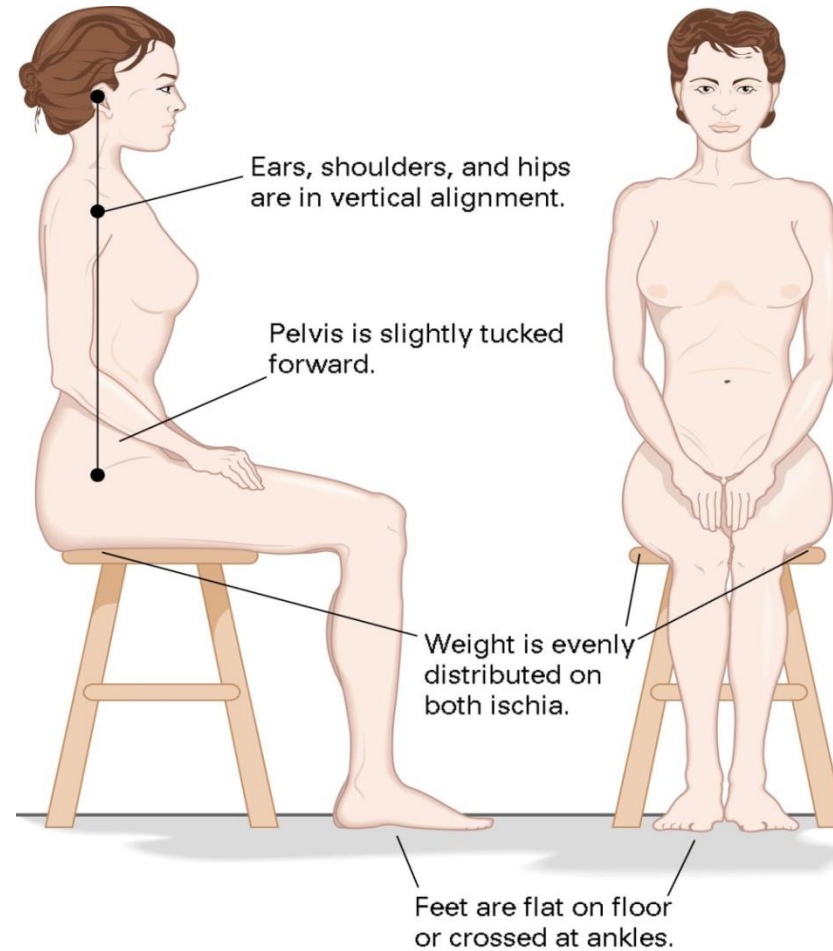


FIGURE 1-9A Correct standing posture.

Correct Sitting Posture



- Move a load only if you can handle it.
- Ask for help if you need it.
- Position load close to your body.
- Keep your palms up—when possible.
- Do not hurry.
- Bend with your knees.
- “Lock-in” the spine.

- Always avoid twisting and turning.
- Let the leg muscles do the work.
- Exhale during lifting.
- Given a choice, push. Do not pull.
- Look where you are going.
- Only one person should be in charge of verbal commands.

- Comes from knowledge and diligence
- Starts with:
 - Eating well
 - Adequate rest
 - Managing stress

- Caused by pathogens, such as bacteria or viruses.
- May be spread from person to person.
- For example, infection by way of blood borne pathogens can occur when the blood of an infected person comes in contact with another person's broken skin

Table 1-2 COMMON INFECTIOUS DISEASES

Disease	Mode of Transmission	Incubation Period
AIDS (Acquired Immune Deficiency Syndrome)	AIDS- or HIV-infected blood via intravenous drug use, semen and vaginal fluids, blood transfusions, or (rarely) needle sticks. Mothers also may pass HIV to their unborn children.	Several months or years
Hepatitis B, C	Blood, stool, or other body fluids, or contaminated objects.	Weeks or months
Tuberculosis	Respiratory secretions, airborne or on contaminated objects.	2 to 6 weeks
Meningitis, bacterial	Oral and nasal secretions.	2 to 10 days
Pneumonia, bacterial and viral	Oral and nasal droplets and secretions.	Several days
Influenza	Airborne droplets, or direct contact with body fluids.	1 to 3 days
Staphylococcal skin infections	Contact with open wounds or sores or contaminated objects.	Several days
Chicken pox (varicella)	Airborne droplets, or contact with open sores.	11 to 21 days
German measles (rubella)	Airborne droplets. Mothers may pass it to unborn children.	10 to 12 days
Whooping cough (pertussis)	Respiratory secretions or airborne droplets.	6 to 20 days

- Based on the assumption that all blood and body fluids are infectious
- Dictates that all EMS personnel take BSI precautions with every patient
- Requires that personal protective equipment (PPE) be available in every vehicle

- Protective gloves
- Masks and protective eyewear
- HEPA and N-95 respirators (fit test)
- Disposable resuscitation equipment



- High Efficiency Particulate Air Respirator (HEPA Mask)



- To Remove Gloves, Hook the Gloved Fingers of One Hand Under the Cuff of the Other Glove.



- Then Slide the Fingers of the Ungloved Hand Under the Remaining Glove's Cuff.



Perhaps the Most Important Infection-Control
Practice Is...

HANDWASHING



- To Wash Your Hands Properly, Lather Well and Scrub Under Your Nails.

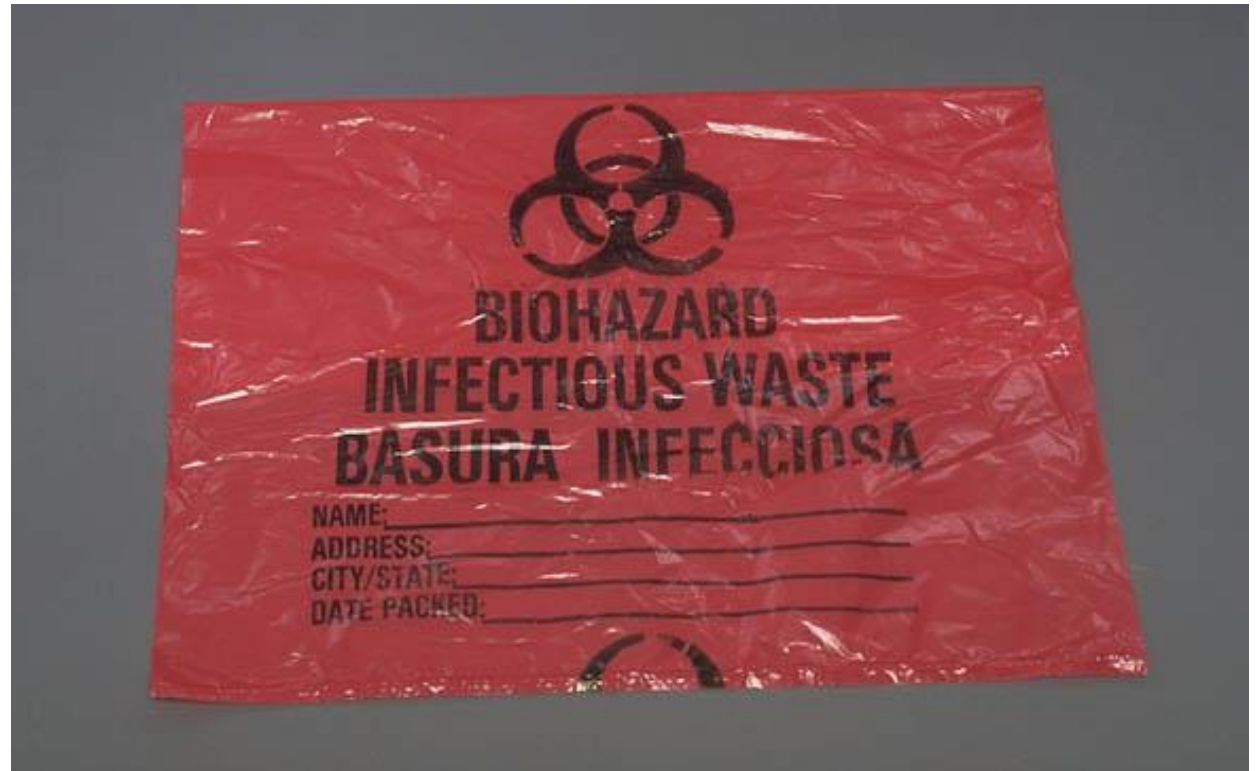


- When you rinse your hands, point them downward so that soap and water run off away from your body.



- Often a requirement of employment
- Some may require boosters
- Available for:
 - Rubella
 - Measles
 - Mumps
 - Chicken pox
 - Tetanus/diphtheria
 - Poliomyelitis
 - Influenza
 - Hepatitis B
 - Lyme disease

- Dispose of biohazardous waste in a properly marked bag.





- Discard needles and other sharp objects in a properly labeled, puncture-proof container.

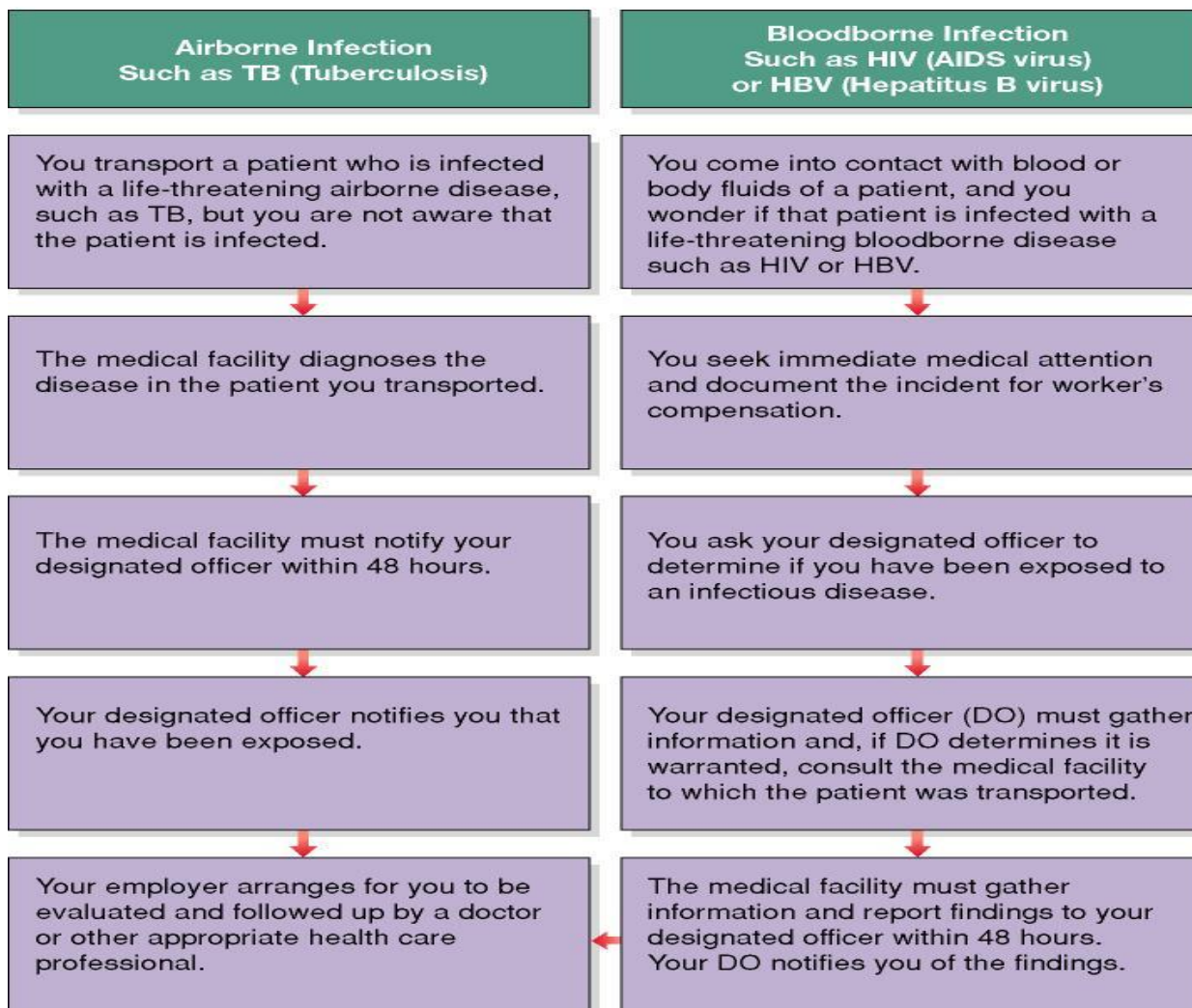
Contaminated
Non-disposable
Equipment Must Be
Cleaned,
Disinfected, or Sterilized.

- **Cleaning**
 - Refers to washing an object with soap and water.
- **Disinfecting**
 - includes cleaning with a disinfectant.
- **Sterilizing**
 - the use of a chemical or steam to kill all microorganisms on an object.

- In most areas, an EMS provider who has had an exposure should:
 - Immediately wash the affected area.
 - Get a medical evaluation.
 - Take the immunization boosters.
 - Notify the agency's infection control liaison.
 - Document the event.

- American federal legislation that outlines procedures to follow post occupational exposure to select pathogens
- Similar laws in Canada are being considered but have not yet been approved

INFECTIOUS DISEASE EXPOSURE PROCEDURE



- Situations involving death and dying are the most personally uncomfortable for most paramedics.
- Each person faces a death situation based on his or her prior experience of loss, coping skills, religious convictions, and other personal background.

- Denial
- Anger
- Bargaining
- Depression
- Acceptance

- Stressor
 - A stimulus that causes stress
 - Tends to be individual
- Adapting to stress is a dynamic, evolving process:
 - Defensive strategies
 - Coping skills
 - Problem-solving skills

- Individual coping strategies require that you know:
 - Your personal stressors.
 - Amount of stress you can take before it becomes a problem.
 - Stress management strategies that work for you.

Table 1-4 **WARNING SIGNS OF EXCESSIVE STRESS**

Physical	Cognitive
Nausea/vomiting	Confusion
Upset stomach	Lowered attention span
Tremors (lips, hands)	Calculation difficulties
Feeling uncoordinated	Memory problems
Diaphoresis (profuse sweating), flushed skin	Poor concentration
Chills	Difficulty making decisions
Diarrhea	Disruption in logical thinking
Aching muscles and joints	Disorientation, decreased level of awareness
Sleep disturbances	Seeing an event over and over
Fatigue	Distressing dreams
Dry mouth	Blaming someone
Shakes	
Headache	
Vision problems	
Difficult, rapid breathing	
Chest tightness or pain, heart palpitations, cardiac rhythm disturbances	

Emotional

Anticipatory anxiety
Denial
Fearfulness
Panic
Survivor guilt
Uncertainty of feelings
Depression
Grief
Hopelessness
Feeling overwhelmed
Feeling lost
Feeling abandoned
Feeling worried
Wishing to hide
Wishing to die
Anger
Feeling numb
Identifying with victim

Behavioral

Change in activity
Hyperactivity, hypoactivity
Withdrawal
Suspiciousness
Change in communications
Change in interactions with others
Change in eating habits
Increased or decreased food intake
Increased smoking
Increased alcohol intake
Increased intake of other drugs
Being overly vigilant to environment
Excessive humor
Excessive silence
Unusual behavior
Crying spells

Shift Work Is Inherently
Stressful Due to the Disruption
of Circadian Rhythms and Sleep
Deprivation.

- The natural sleep cycle (typically 24hrs) based on the ebb and flow of the body based on the earth's rotation
- Hormones melatonin and cortisol are released by the body's sensation of darkness, this causes sleepiness
- This can be affected by working nights and trying to sleep during the day
- Travel through different time zones may also affect this rhythm ie: jet lag

- Shift work may require sleep in the daytime
- Tips:
 - Sleep in a cool, dark place.
 - Stick to a common sleeping time and pattern.
 - Unwind appropriately after a shift in order to rest.
 - Post a “day sleeper” sign on your front door, turn off the phone’s ringer and lower the volume of the answering machine.

- Use controlled breathing...focus attention on your breathing.
- Use reframing...mentally reframe interfering thoughts.
- Attend to the medical needs of the patient ...even if you know them

- An event that has a powerful emotional impact on a rescuer that can cause an acute stress reaction.
- Like stress, they are individual incidents to each paramedic

- Critical incidents are uncommon. They include:
 - Injury or death of an infant or child
 - Injury or death of someone known to EMS personnel
 - Injury, death, or suicide of an EMS worker
 - Extreme threat to an EMS worker
 - Disasters, or multiple-casualty incidents
 - Injury or death of a civilian caused by EMS operations
 - Incidents that draw unusual media attention
 - Prolonged incidents

- A system of interventions usually performed by regional, non-partisan, multi-disciplinary teams and trained mental health workers.
- A critical incident can impact a single crew or an entire agency.

- Pre-incident stress training.
- On-scene support.
- Advice to command staff.
- Initial discussion.
- Defusing.
- Demobilization.

- Critical incident stress debriefing.
- Follow-up services.
- Special debriefings to community groups.
- Spouse and family education and support.
- Individual consultations.

- Safety is a priority!
- Risks include violent people, environmental hazards, structural collapse, motor vehicles, and infectious diseases.
- Many of these hazards can be minimized with protective equipment such as helmets, body armor, reflective tape, supportive footwear, and BSI precautions.

- Safety issues often arise out of poor interpersonal relations
- Begins with effective communications
- Treat every person you meet with dignity and respect regardless of race, age, sex, religion, or present background.

- Roadways are unsafe, drive as if they are.
Learn principles of:
 - Safely following emergency escorts
 - Managing intersections
 - Hazardous conditions
 - Parking at an incident
 - Safe approach
 - Patient compartment safety
 - Safe use of emergency lights and warning devices

- Remember that you are in the public eye
 - Drive with good habits
 - Wear seatbelts both for personal safety and as a public model
 - Lights and sirens are tools not toys

- Wellness of the Paramedic
- Impact of Shift Work on the Paramedic
- Proper Body Mechanics
- Managing Hostile Situations
- EMS is stressful awareness and effort is required to adapt and overcome