

THE WELL BEING OF THE PARAMEDIC

Primary Care Paramedicine

Module: 03

Section: 01a



- Wellness of the Paramedic
- Impact of shift work on the Paramedic
- Proper body mechanics

- Well-being is a fundamental aspect of top-notch performance in EMS. It includes:
 - Physical well-being
 - Mental and emotional well-being
 - Safe lifting
- Extremes of shift work, lifting situations, weather conditions, and irregular schedules make the job difficult
- Awareness of physical and mental health is a vitally important part of your EMS career.

- Mental health is just as important to our lives as our physical health
 - Mental health is not the same thing as the absence of a mental illness.
 - Mental health includes:
 - How you feel about yourself, the world and your life
 - Your ability to solve problems and overcome challenges
 - Your ability to build relationships with others and contribute to your communities
 - Your ability to achieve your goals



- Your mental health can affect many areas of your life:
 - Work, school or home life
 - Relationships with others
 - Sleep
 - Appetite
 - Energy levels
 - Ability to think clearly or make decisions
 - Physical health
 - Life satisfaction and more...



- 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



Core Components of Physical Fitness

- Muscular strength
- Cardiovascular endurance
- Flexibility and strength
- Nutrition and 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



- Weight of equipment being carried in and out of the call
 - Weight of the patient

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



- Doing CPR for period of time
 - Hiking to patients
- Building with no elevator

- 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.



- Accessing patients in a car or between the bed and a wall

- 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.

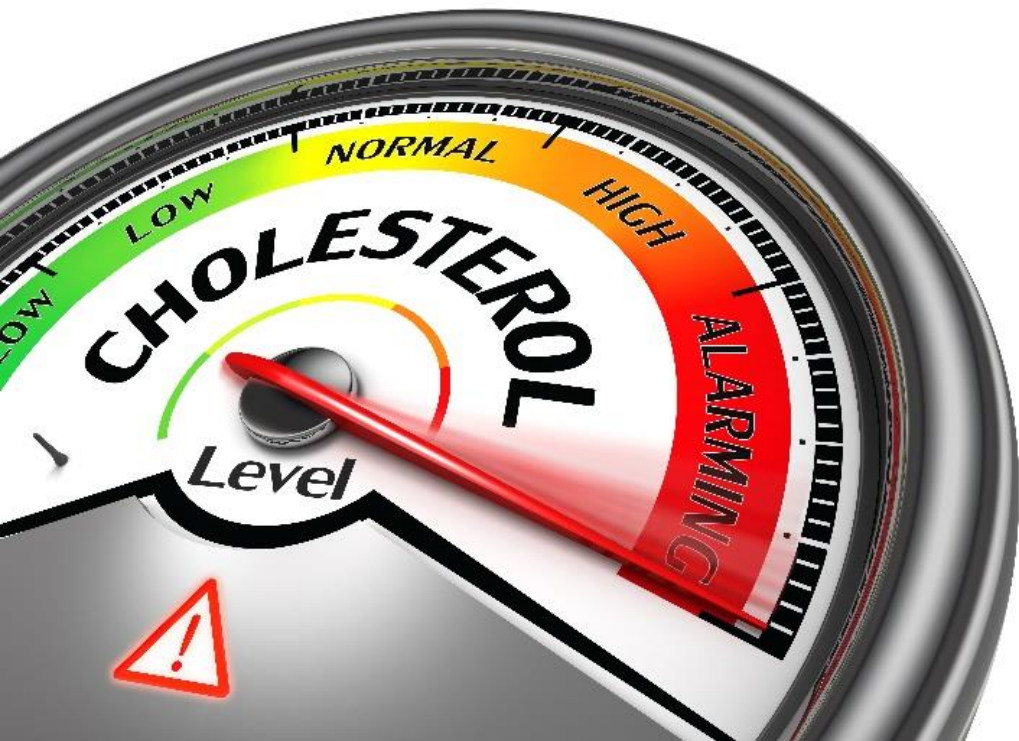


- Meals on the run, planning well
 - Access to kitchens

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



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



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

Serving size	→	Serving Size 8 fl oz (240 mL)
Number of servings per container	→	Servings Per Container 8
<hr/>		
Amount Per Serving		
Calories per serving	→	Calories 110 Calories from Fat 0
<hr/>		
% Daily Value*		
<hr/>		
Total Fat 0g		0%
Sodium 0mg		0%
Potassium 450mg		13%
Total Carbohydrate 26g		9%
Sugars 22g		
Protein 2g		
<hr/>		
Vitamin C 120% • Calcium 2%		
Thiamin 10% • Niacin 4%		
Vitamin B6 6% • Folate 15%		
<hr/>		
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.		

Serving size

Number of servings per container

Calories per serving

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

What are ultra-processed foods?

- Foods that have been modified; sometimes modified to the point where they have been stripped of most of their nutritional value. (white breads, chips, chocolate, nuggets etc...)



Guess what food this is?

INGREDIENTS: SUGAR / GLUCOSE-FRUCTOSE, ENRICHED WHEAT FLOUR, VEGETABLE OIL (MODIFIED PALM AND MODIFIED PALM KERNEL OILS), LIQUID WHOLE EGGS, GLYCERIN, WATER, BAKING POWDER, SALT, MODIFIED MILK INGREDIENTS, PROPYLENE GLYCOL, SOY PROTEIN, WHEAT STARCH, MODIFIED CORN STARCH, SORBITAN MONDSTEARATE, POLYSORBATE 60, POTASSIUM SORBATE, GUAR GUM, MONO AND DIGLYCERIDES, CELLULOSE GUM, CORN STARCH, XANTHAN GUM, SORBIC ACID, SODIUM BISULPHATE, SODIUM ACID PYROPHOSPHATE, SOY LECITHIN, AMYLASE, LIPASE, ACACIA GUM, ARTIFICIAL FLAVOUR, COLOUR. **MAY CONTAIN PEANUTS AND/OR NUTS.**

Guess what food this is?


- If you can't tell what it is by reading the ingredients, then it probably isn't good for you



- More and more research is showing that sugar might be the culprit for the increasing rate of metabolic and cardiovascular diseases.


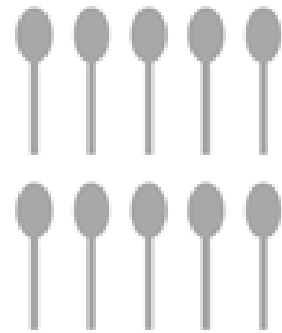


How many teaspoons of **added sugar** are in your favourite beverage?



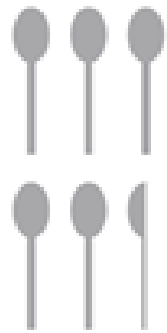
Pop 355ml

=



100% Orange juice 250ml

=



Sports drink 400ml

=



Specialty coffee 360ml

=



- Exercise will:
 - Improve cardiovascular endurance
 - Help lower blood pressure
 - Help tip to the balance of body composition
 - Prolong your career
 - Prevents injury
- 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:
 - Manufactured 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.

- 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 Standing Posture

- Correct posture will minimize the risk of back injury

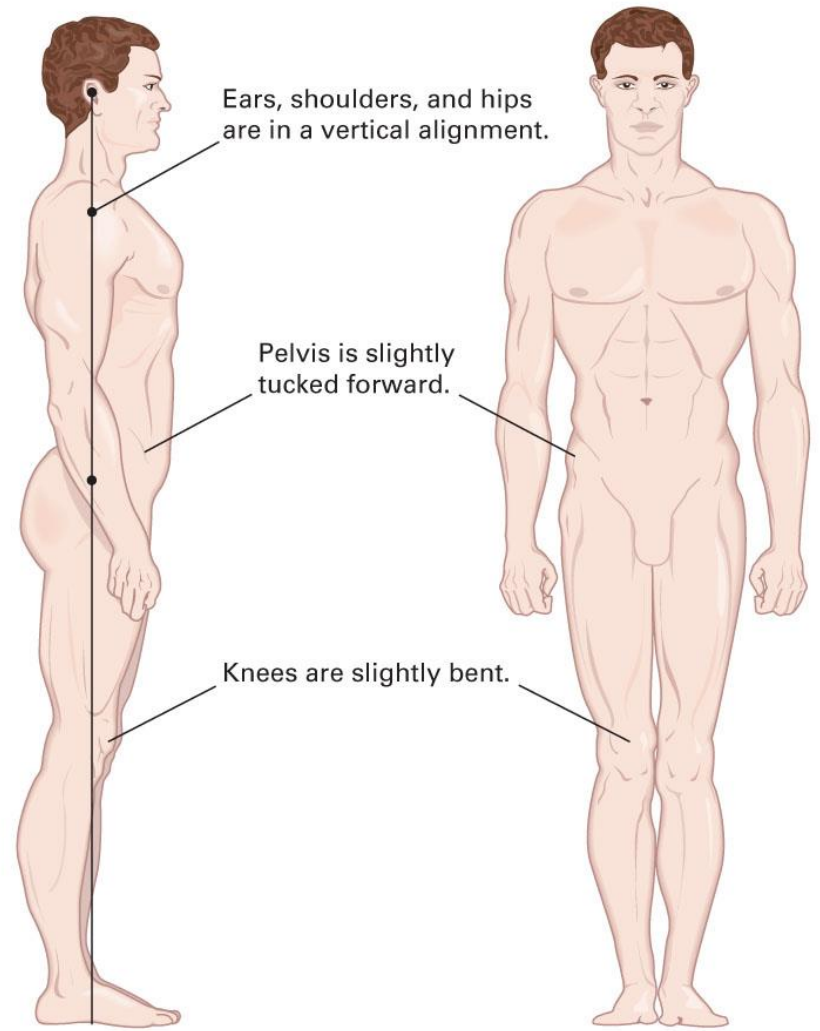
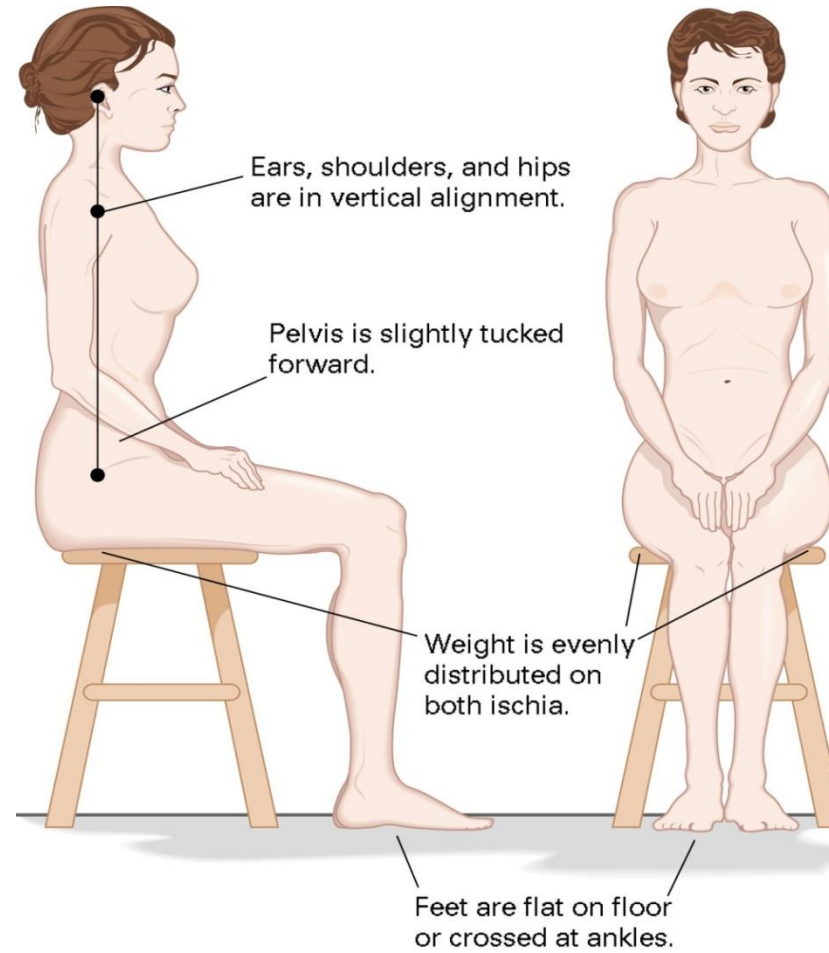


FIGURE 1-9A Correct standing posture.

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.

- Note: Due to patient locations or weight it may be difficult to use proper body mechanics (ie. Bathroom)
- Utilize other resources or devices to assist if possible
 - Lift assists
 - Patient transfer and handling systems

- 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
- Gowns
- Chemtec suits
- PAPR (Powered air purifying respirator)



- High Efficiency Particulate Air Respirator (HEPA Mask)
 - Protects against airborne transmission of infectious agents
 - Requires mask fitting on a regular basis (every two years)



- 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

How Should You Wash your Hands?

- **Wet** your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
- **Lather** your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
- **Scrub** your hands for at least 20 seconds.
 - Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
- **Rinse** your hands well under clean, running water.
- **Dry** your hands using a clean towel or air dry them.

- 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


Decontamination of Equipment

- Dispose of biohazardous waste in a properly marked bag or container.



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



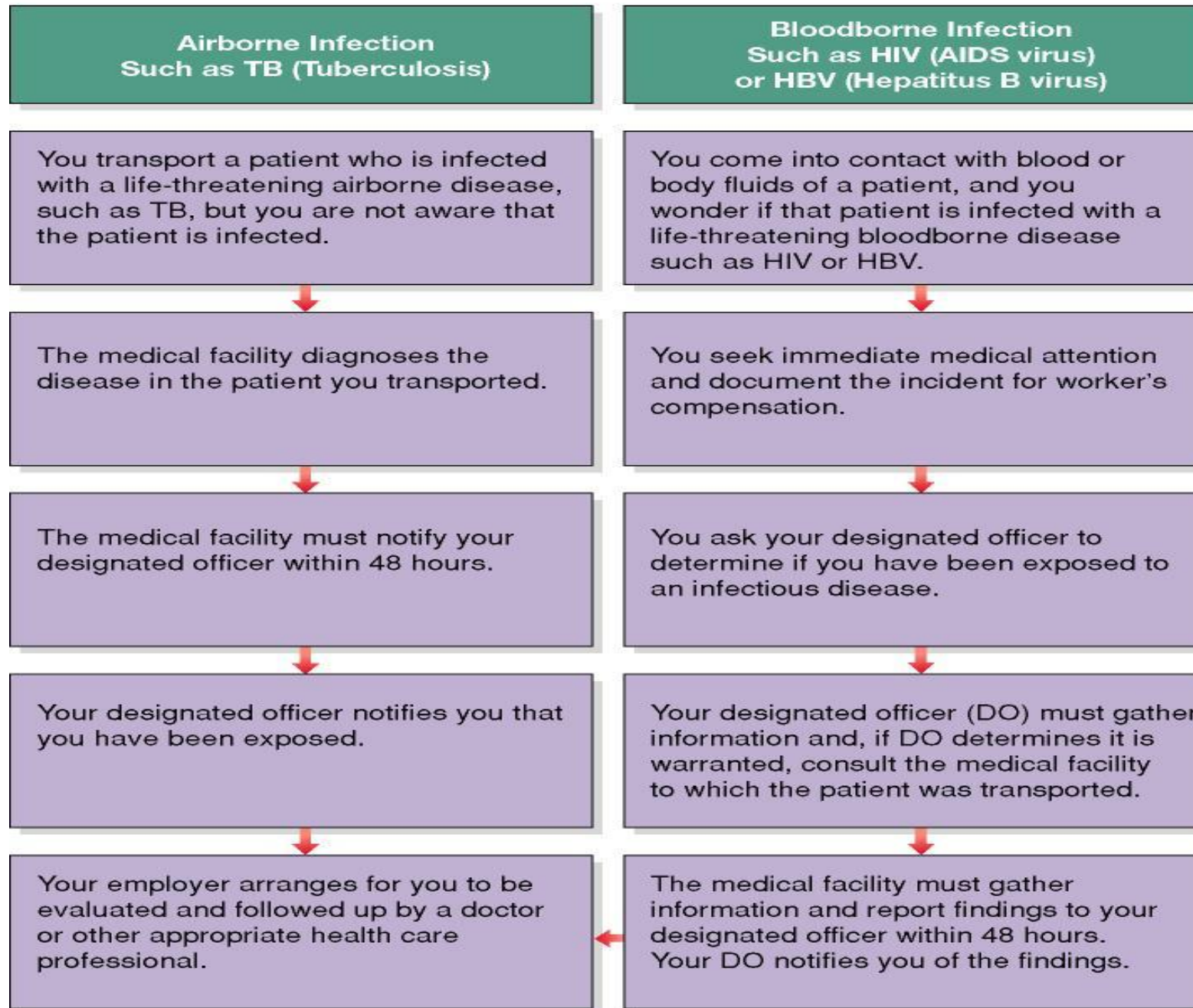
A healthcare worker wearing a yellow protective gown, a light blue surgical mask, and blue gloves is working in an operating room. The worker is looking towards the camera. In the foreground, there is a stainless steel surgical tray containing various instruments and a significant amount of red blood. The background shows the typical environment of an operating room, including medical equipment and a white chair.

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.
 - Notify supervisor if required.
 - Document the event.

INFECTIOUS DISEASE EXPOSURE PROCEDURE

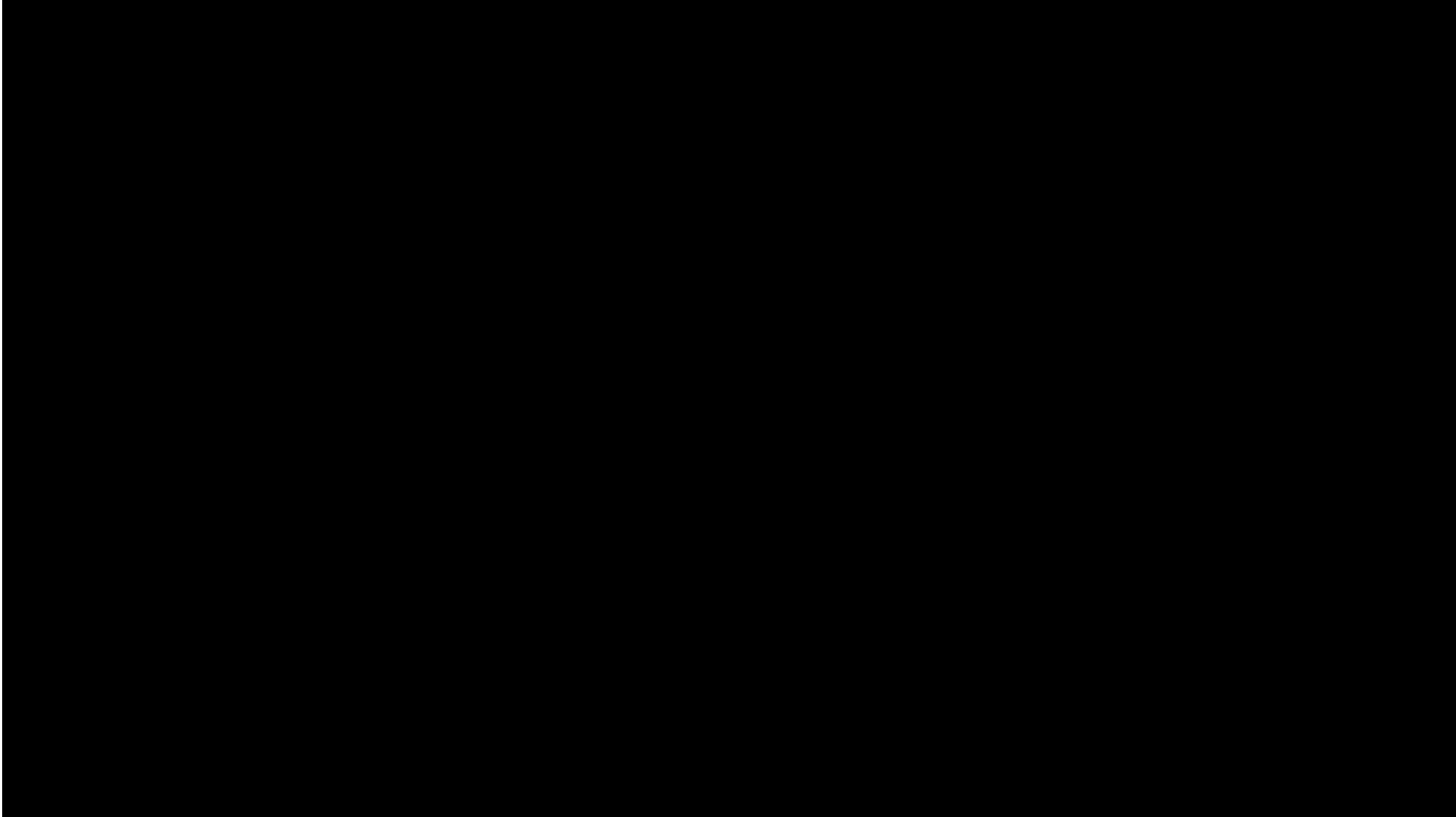


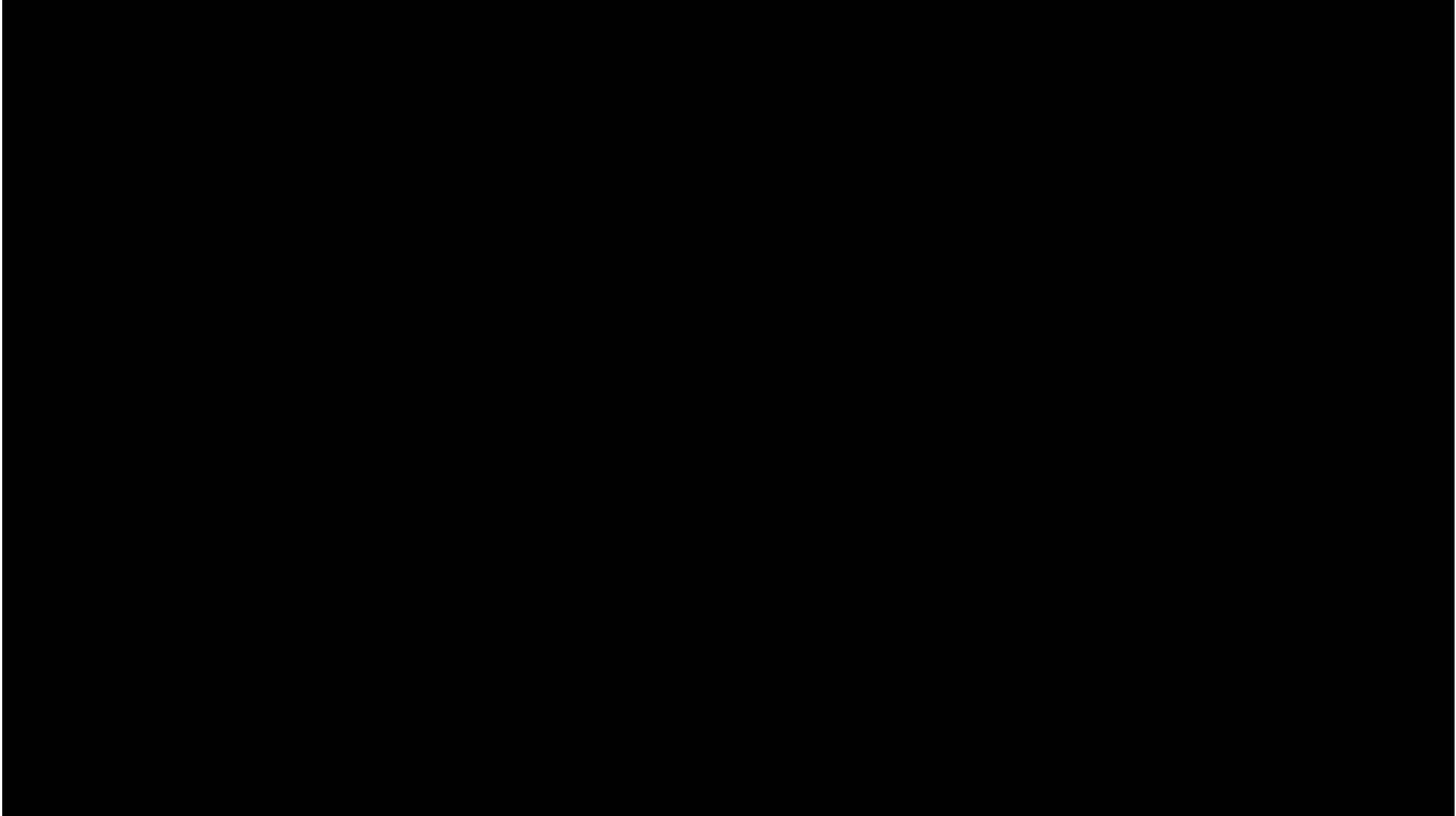
Safety is a priority!

- 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.

- Working closely with a partner for long hours requires compromise
- Teamwork is key
- Open discussion
- Sharing of responsibilities and tasks
- Respect and support
- Establishing personal boundaries
- Establishing trust and rapport





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