Health Hazards in the Veterinary Practice

Course 101
Module 2
OSHA regulations

OSHA stands for Occupational Safety and Health Administration. It is a government agency that provides standards for facilities that deal with potentially hazardous chemicals, equipment, etc. Following are some of the regulations that should be followed when working in a clinic or any other facility where blood-borne pathogens may be present.
1. Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other Personal Protective Equipment (PPE).
2. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or bench tops with blood or other potentially infectious materials.
3. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate PPE such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. PPE will be considered “appropriate” only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee’s work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.
4. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use PPE when, under rare and extraordinary circumstances, it was the employee's professional judgement that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgement, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.
5. The employer shall ensure that appropriate PPE in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

6. If a garment is penetrated by blood or other potentially infectious materials, the garment shall be removed immediately or as soon as feasible.
7. All PPE shall be removed prior to leaving the work area.
8. Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.
9. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, or droplets of blood or other potentially infectious materials may be generated and eye, nose, and mouth contamination can be reasonably anticipated.

10. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.
11. All bins, pails, cans and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.
Here are a list of situations and the OSHA recommended Personal Protective Equipment that should be used:

Bathing: Utility gloves, splash goggles, apron, sleeves, rubber boots*
Pest Management: Utility gloves, splash goggles, apron, sleeves, ventilation, rubber boots*
Dentistry: Exam gloves, apron, face shield, safety glasses
X-Ray: Lead gloves, lead apron, thyroid collar, lead glasses*
Pouring anesthetic gas liquids: Utility gloves, splash goggles, ventilation
Cleaning litter boxes: Utility gloves, splash goggles, apron, ventilation, dust mask*
Preparation of lab samples: Utility gloves, splash goggles

*Optional in low hazard settings
OSHA Regulations

- Preparing chemotherapy drugs: Double gloves, splash goggles, apron, sleeves, ventilation
- Pouring liquids: Utility gloves, splash goggles, apron, rubber boots
- Lifting heavy objects: Non-skid boots, steel toe shoes, back support
- Kennel: Non-skid shoes, ear plugs

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Safe handling of animals

Restraint is one of your most important jobs when working in a clinic. It is very important to know proper techniques so that no one working in the clinic gets hurt and that the animal does not hurt itself. Learning proper technique is not something you learn in one day. It takes practice and experience. If you need help, do not hesitate to ask.
Safe Handling of Animals

- Observe the animal before attempting to pet or pick it up
- Employee safety is the first priority
- Do not scruff or put too much pressure on a breed with large eyes

The amount of restraint required depends on the individual animal and the procedure being performed. You should always observe the animal before attempting to pet it or pick it up. Observing body language is as informative when it comes to animals as it is with humans. Employee safety is the first priority—DO NOT attempt to handle a fractious or aggressive animal without assistance. Some owners get offended if you suggest muzzling their pet, even if the pet has already been growling or even snapping at you. Sometimes, if you explain that it is best for the pet due to the fact that the procedure will go smoother and it will not be as stressful in the long run for the pet, they will let you do it. Muzzling is safer for the pet, veterinarian, assistant, and the owner. One thing you never want to do is scruff or put too much pressure on a breed that has enlarged eyes. Scruffing a Pug, Shih Tzu, or Persian could possibly pop an eye out. It makes restraining these breeds more difficult due to the fact that they are brachycephalic breeds, which means that they have flat faces, so there is not much area for a muzzle to fit. It is possible, though. Just be aware of differences in breeds and when in doubt, ask your veterinarian how they would like you to hold a certain animal.
If you need to pick up an animal, always bend at the knees. Do not let your back do the work. Place one arm under the animal's front legs and the other arm behind the back legs. Lift with your knees. Never place an animal on a counter or in a tub and walk away. You need to always have control. Even turning your back for a second is enough time for the animal to jump off the counter. Chasing an animal around the clinic that has escaped your control does not look good to the clients. All animals should be kept on a leash or in a carrier to help prevent escapees. If you tie a patient up and then need to go assist the veterinarian or something else, put the animal back into a cage. Never walk off and leave the animal. You must be in direct contact with it. If the animal is aggressive, muzzle it before lifting it. You do not want to get bitten in the face while placing an animal on the exam table. Always get help in lifting an animal if it weighs too much. It may take two of you to lift it and then to keep control of it while it is on the table. The most important part of the animal that you need to restrain during an exam is the head or, in the case of a feline, the head and the four paws. If a cat is overly anxious, get help before someone gets hurt.
The restraint technique you use will depend on several things. Is the animal injured? If it is, you must change your holding technique so that the veterinarian can get to the affected area without fighting your arms. The way you hold an animal will be different if a urinary catheter is being placed than it would be if blood is being drawn from the jugular vein. You should be aware of equipment your clinic may have that is used for restraint. Most clinics have a snare. Take precautions so that the snare does not choke the animal. The same hazard is possible with a cat bag. Use common sense when restraining.
Safe handling of equipment

You should always be very careful with any equipment you need to handle. Even small equipment, such as otoscopes, may be quite expensive. If you are asked to clean an instrument, do so carefully and if there is an instruction manual, read it first. Some equipment in the clinic is very sensitive and if you use the wrong cleaning solution, it may damage the equipment.

There are dangers associated with equipment in the clinic. When using the autoclave, be aware that the machine will get extremely hot. Be careful not to burn yourself. It should be allowed to vent before you open the door, because if it is opened too soon, burning steam will roll out at you. Another piece of equipment used frequently is a centrifuge. Make sure the top is securely closed before starting it and never open the lid on the centrifuge until it has completely stopped. If a tube breaks, the fragments can be thrown around and if the machine is still going, you run the risk of having small pieces of glass thrown at you at a high rate of speed. Never attempt to stop the centrifuge with your fingers. It can be broken easily. If you are cleaning a stethoscope, be careful with it. Remove the ear pieces and disinfect them. The bell can be cleaned with a cloth slightly damp with alcohol. When performing dentistrys, the ultrasonic scaler should never be allowed to overheat. And if your clinic has an endoscope, do not touch it unless you are specifically told to do so by the veterinarian. They are very fragile instruments and extremely costly.
An important piece of equipment used in most clinics that poses a serious risk to you is the radiology equipment. Always wear the personal protective equipment that must be provided by your employer. Excessive exposure to radiation can cause many problems including burns or cancer. Even in an emergency, you must take enough time to put on the lead apron, gloves, and thyroid collar. And just as important, always wear your dosimeter. If you do not have one, make sure one is ordered for you immediately. This device measures how much radiation you have been exposed to in a certain period of time. Never stand in the radiology area if you are not the assisting with the x-ray in progress. If you are pregnant or planning to become pregnant in the near future, do not go anywhere near the radiology machine when it is on! Also, if you have not been thoroughly trained on how to use the radiology machine, do not attempt to operate it.
The anesthetic machine is a piece of equipment with which you should always be careful. If it is not put together properly or if a bolt is not tightened all the way, the machine may not work correctly and you run the risk of having anesthetic gas escaping into the room, which is not good for you. It may also not keep the animal anesthetized appropriately and it could even put the animal at risk. Anesthesia is an area that only trained personnel should be handling. Even under the best circumstances, anesthesia has risks. If you are not properly trained, it can pose a threat to everyone involved, particularly the patient that has been placed in your care.
Safe handling of drugs

Handling of pharmacy items should always be done carefully. If it is a powder that must be reconstituted, make sure you know how much water to add to the bottle. If too much is added, the strength of the drug will be diminished. Always count tablets carefully and make sure that the dosage strength prescribed is what you are using. There are a number of drugs in the clinic that are available in two or more dosage strengths. You do not want to send 100mg tablets home with the owner if the veterinarian prescribed 25mg.

There can also be hazards to you associated with the handling of drugs. When counting the tablets, use a counting tray, not your hands. When dealing with a powder, always wear gloves, a mask, and safety goggles. It is much better to be safe than sorry. When in doubt, ask your veterinarian what the risks are and how they expect you to handle certain medications. Every clinic has MSDS (Material Safety Data Sheets) on medications, chemicals, etc. that are used in the clinic. Know where they are and how to interpret them. Always thoroughly wash your hands after handling any medications.