Working as a Veterinarian or Veterinarian Technician

This sheet talks about some of the general exposures present in veterinary work settings and outlines some resources available to help create a safe work environment. This information is based on published research studies. It should not take the place of medical care and advice from your healthcare provider.

What types of hazards might be at my workplace?

In general, workplace hazards that veterinarians (vets) and veterinary technicians (vet techs) could include:

- anesthesia and waste gases
- X-rays / ionizing radiation
- medications
- pesticides
- cleaning agents and other chemicals
- accidents (bites, falls, needle sticks)
- infections from bites or scratches
- animal-transmitted diseases and parasites
- allergic reactions
- heavy lifting and physical strain
- shift work
- mental stress

Veterinary staff work in many different environments, and everyone may have different concerns about the hazards in their workplace. Remember that being around a potential hazard does not mean your exposure is high enough to

cause harm. There are also safety steps all workers can take to limit and reduce their exposure.

General Pregnancy Information:

Birth defects can happen in any pregnancy for different reasons. Out of all babies born each year, about 3 out of 100 (3%) will have a birth defect. We look at research studies to try to understand if a certain exposure might increase the chance of birth defects in a pregnancy. Also, miscarriage is common and can occur in any pregnancy for many different reasons.

Not all exposures increase the chance of birth defects. If an exposure can cause birth defects, it is most likely to do so during the first trimester (through week 13) of pregnancy. Dose (how much) of an exposure is also important to consider when evaluating workplace hazards. For more information on fetal development during pregnancy, please see the MotherToBaby fact sheet on critical periods of development at: https://mothertobaby.org/fact-sheets/critical-periods-development/.

I work around anesthetic agents. Can this harm my pregnancy?

Older studies, which were mostly done before the use of modern scavenging equipment (devices that collect anesthesia from the air to prevent its inhalation by staff), suggested that repeated exposure or exposure to high levels of inhaled anesthetics in an occupational setting might increase the chance of birth defects or miscarriage. However, occupational exposure to inhaled anesthetics with the use of scavenging equipment and proper techniques is not expected to increase the chance of miscarriage or birth defects.

Anesthetics can be given through injection, IV infusion, intubation, or mask inhalation. For each person, the risk of exposure to inhaled anesthesia will depend on the specific drugs used, how they are given, and the protective measures that are in place. Workers often face their highest chance of exposure during induction and recovery and when filling the vaporizer. Air monitoring can be done to evaluate staff exposure. The Occupational Safety & Health Administration (OSHA) has a document (https://www.osha.gov/waste-anesthetic-gases/workplace-exposures-guidelines) with detailed information on workplace controls and recommended exposure limits for anesthetic gases.

I am around our x-ray machine. Does this mean that I am exposed to radiation?

In veterinary work settings, ionizing radiation could also occur with use of radioactive isotopes and radiation therapy machines (for example, assisting in fluoroscopy procedures and I-131 treatments for hyperthyroid animals). Our MotherToBaby fact sheet on working around ionizing radiation has more information on working with x-ray machines: https://mothertobaby.org/fact-sheets/ionizing-radiation-workplace-pregnancy/.

Should I be worried about handling medications during pregnancy?

There are some medications that are considered unsafe to directly handle while pregnant without taking proper precautions. A list of some hazardous drugs can be found in Tables 1 and 2 (https://www.cdc.gov/niosh/docs/2016-161/default.html) of this document from the National Institute for Occupational Safety and Health (NIOSH).

Workers could be exposed to hazardous drugs while handling them during reconstitution, transfer between containers, spiking and unspiking IV containers, priming IV tubing, connecting or disconnecting syringes from injection ports, disposal, and/or with equipment maintenance. Handling body fluids of treated animals such as vomit and urine can expose you to medications. Exposure can also occur when stocking and storing hazardous drugs as surface contamination studies have shown that areas where the drugs were stored and handled were often contaminated.

Infertility, loss of pregnancy, birth defects, and poor fetal growth have been reported with handling exposure for some medications at work. However, most of these studies were among nurses who spent a lot of time around hazardous drugs. All employees handling medications should have training that covers ways to lower exposure to hazardous medications including opening, handling, administering, storing and disposal.

NIOSH has a document with tips to prevent occupational exposure to hazardous drugs (https://www.cdc.gov/niosh/docs/2023-130/default.html). If you handle hazardous medications, be sure to wear protective gear. When you are finished handling the drugs, clean the preparation area and wash your hands. Do not eat or drink in the area where these drugs are prepared or administered or when wearing contaminated gloves or other protective clothing.

Are there animal (zoonotic) or parasitic diseases that I should be concerned about?

A zoonotic disease is a disease that can be passed between animals and humans. Zoonotic diseases can be caused by viruses, bacteria, parasites, and fungi. Exposure can occur when people come into contact with the saliva, blood, urine, or feces of an infected animal, or when they are bitten by a tick or mosquito. When you are pregnant, your body can have a harder time fighting infections and you have a greater chance of developing serious complications from diseases. If you are pregnant or breastfeeding and think you have contracted a disease, illness, or parasite contact your healthcare provider.

Some of the diseases that vets and vet techs might be exposed to include Q Fever, Toxoplasmosis, Lymphocytic Choriomeningitis Virus, Rabies, Mites, Scabies, Brucellosis, Leptospirosis, *Chlamydophila psittaci*, Ringworm, Giardiasis and Helminths (worms). MotherToBaby has fact sheets on several of these exposures at: https://mothertobaby.org/fact-sheets/.

Veterinary staff who are pregnant and who are responsible for dealing with bodily fluids from the animals, such as cleaning cages, litter boxes, or feces from an infected animal, can consider passing this responsibility to another co-worker. However, all staff members should wear proper protective equipment such as thick disposable gloves, protective clothing, and a mask while handling sick animals and their samples regardless of whether they are pregnant or not. Proper hand washing is critical. Make sure you are up to date on all your immunizations.

The veterinary infection control committee of the National Association of State Public Health Veterinarians (NASPHV)has a document (http://nasphv.org/Documents/VeterinaryStandardPrecautions.pdf) that outlines protocols for the prevention of zoonotic disease.

How can I learn more about the pesticides and cleaning chemicals I work with?

Vet workers use strong cleaning chemicals to sterilize equipment and rooms and could be around pesticides. You can learn about the ingredients in the products that you use by looking at their Safety Data Sheets (SDS). The SDS should be made available in your workplace. These sheets will describe the proper way to use, store, and dispose of these chemicals. Proper workplace practices and precautions will limit your exposure to most of these products. Check to make sure that you are using the correct type of gloves and other personal protective equipment. Make sure the ventilation/air exchange in your workspace is working properly. An occupational health specialist or industrial hygienist can help make sure your worksite has the correct protection in place.

Can heavy lifting, strain or stress pose a risk for my pregnancy?

Vet workers have a physically demanding job that involves lifting and restraining animals and long periods of standing as well as long work hours. Ligaments (the tissue that connect bones) start to loosen throughout pregnancy, which makes them more prone to injury. People who are pregnant will be adjusting to a shifted center of gravity. This can make balancing more difficult.

Some studies suggest that prolonged standing during pregnancy is associated with lower birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth) or preterm labor and preterm delivery (birth before week 37). Some studies showing low birth weight are from developing countries, where poor nutrition and tougher working conditions may also affect the results. There are some published recommendations on occupational lifting related to pregnancy. Talk with your provider about your personal limits. Be sure to request training on proper lifting techniques to reduce chances of personal injury. Consider asking for help when you need to lift or restrain animals. If your job requires you to be on your feet for long periods of time, take regular short breaks of about 5-10 minutes every 2 hours.

How do I reduce job-related exposures?

MotherToBaby has a general fact sheet on working during pregnancy and breastfeeding (https://mothertobaby.org/fact-sheets/reproductive-hazards-workplace/) with ways to reduce potential chemical exposures. Your worksite should provide SDS on all chemicals and proper personal protection for all parts of your job. Be certain to use them, even when not pregnant or breastfeeding.

One of the most important steps you can take is to practice proper hand washing. Wash hands before and after each patient and after contact with any bodily substance or articles contaminated by them. Wash hands before eating or drinking; after cleaning animal cages or animal-care areas, after handling chemicals, and whenever hands are visibly soiled. The NASPHV created a Model Infection Control Plan for Veterinary Practices that outlines hand washing, use of gloves, sleeves, facial protection, and protective outerwear, along with animal-related injury prevention, protective

actions to use during veterinary procedures, and environmental controls. This plan is available at https://www.nasphv.org/documentsCompendiaVet.html

Who can I contact for more information?

If you have specific concerns regarding your worksite discuss them with your healthcare provider or call MotherToBaby with your questions. You or your employer can contact an industrial hygienist (https://aiha.org/public-resources/consultants-listing) to have your worksite evaluated for ways to keep all workers there as safe as possible. Small businesses can also contact OSHA's on-site consultation services to help determine whether there are hazards at their worksite: https://www.osha.gov/consultation.

Some additional web resources:

- American Veterinary Medical Association (AVMA): www.AVMA.org
- Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/niosh/topics/veterinary/hazard.html
- National Association of State Public Health Veterinarians (NASPHV): www.nasphv.org
- National Institute for Occupational Safety and Health (NIOSH): https://www.cdc.gov/niosh /
- NIOSH – The Effects of Workplace Hazards on Female Reproductive Health: https://www.cdc.gov/niosh/docs/99-104/
- Occupational Safety and Health Administration (OSHA): https://www.osha.gov/SLTC/reproductivehazards/index.html
- Office of Women's Health at the US Food and Drug Administration (FDA): https://www.fda.gov/consumers/consumer-information-audience/women

Please click here for references

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, July 1, 2025.