

# Radiation Safety in Veterinary Practices

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The California Department of Public Health Radiologic Health Branch (RHB) oversees radiation safety through the enforcement of Title 17 of the California Code of Regulations (CCR) and periodically inspects veterinary practices with registered radiation-producing machines. Veterinary practices are subject to numerous radiation safety and health laws to ensure that worker exposure to radiation is minimized. This article will highlight some of the regulations that the RHB enforces.

### Equipment Registration

CCR 17 Section 30108 states that every person possessing a reportable source of radiation must register with the RHB. These include stationary and portable X-ray units, dental units, computed tomography, and therapeutic radiation machines. If a machine is going to be decommissioned, the RHB also requires that the permit holder complete a registration withdrawal form. Registration forms for both new and used/transferred equipment as well as decommissioned machines may be downloaded from [cdph.ca.gov](http://cdph.ca.gov) > Division of Radiation Safety and Environmental Management > Radiologic Health Branch program section.

### Notices and Documentation

RHB inspectors will look for several postings in the radiation area during inspections. Examples include an X-ray caution sign, a radiation safety notice to employees, radiation emergency procedures, a posted copy of CCR Title 17 or a notice indicating where a copy is located for review, and others. The RHB also will ask to see a written radiation safety policy for the practice. The CVMA sells a Radiation Compliance Kit at a discounted price to members to assist in meeting RHB requirements. More information about the kit may be found in the Products section of [cvma.net](http://cvma.net).



## Personal Protective Equipment

CCR 17, Section 30314(b)(2) requires any person operating the X-ray machine or in the radiation area who is not standing behind a protective barrier to wear a specified lead apron. In instances that require a person to hold or support an animal during radiation exposure, both a lead apron and lead gloves are required. While these are the minimum requirements, practices may choose to provide additional protection such as thyroid shields and goggles. Personal protective equipment must be in good repair and documentation of routine inspection will be requested during RHB inspections.

## Radiation Monitoring Badges

Title 10, Section 20.1201, 20.1207, and 20.1208 of the Code of Federal Regulations set the maximum annual occupational radiation exposure limits permitted by law for adults, minors, and embryos/fetuses. In order to accurately monitor and verify that no exposure violations occur, the use of radiation monitoring badges is recommended. Badges must be stored next to a control badge outside the radiation area and only worn during procedures in which workers may be exposed to radiation. The badges are sent for analysis according to manufacturer recommendation and individual exposure reports for each employee must be provided to each employee confidentially. Exposure reports should be retained. If a worker's radiation exposure level

exceeds the maximum allowable limit, the employer must institute measures to stop further radiation exposure to the worker.

## Animal Restraint

CCR 17, Section 30314(b)(3) states: "No individual shall be regularly employed to hold or support animals during radiation exposures. Operating personnel shall not perform this service except very infrequently and then only in cases in which no other method is available." Many veterinary practices find this regulation cumbersome because, by the nature of animal patients, physical restraint is often needed for the well-being of the animal and to minimize motion artifact and subsequent retakes. RHB inspectors will ask for confirmation that this regulation is being followed and may ask to see inanimate objects that may assist in non-physical restraint of animals. Examples include troughs, leashes, straps, sand bags, and bean bags. The inspectors may also inquire about the use of chemical restraint. To that end, it may be useful to have a written restraint policy that addresses circumstances in which different types of restraint should be utilized. Also, documentation of staff training on restraint techniques is helpful in proving compliance.

More information about radiation safety may be found on CVMA InLine ([cvma-inline.net](http://cvma-inline.net)) in the Regulatory Compliance Resources section or at the CDPH RHB website. ■

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