

This RIN is to provide guidance to owners/operators of diagnostic x-ray facilities in Veterinary Medicine on the need for and appropriate wearing of personal radiation dosimeter badges. Use of body badges is a requirement of practice by the College of Veterinarians of BC (CVBC).

In British Columbia, *WorkSafeBC's Occupational Health and Safety Regulation* (the *Regulation* - see [Part 7, Div 3](#)) requires that the employer must ensure the worker is provided with and uses a personal dosimeter if a worker exceeds or may exceed the action level of an exposure of 1 mSv/year*. This exposure is determined for the whole body (effective) dose and is measured by wearing a badge on the body. In addition to body badges, staff may require secondary dosimeters for measuring exposure of the hands and head/eyes.

To determine whether staff require secondary dosimeters, answer the following:

- 1) Do any annual body doses at your facility exceed 1 mSv/year? This is determined from the primary badge (personal dosimeter) worn at waist level **underneath** the lead apron.
- 2) Do you need to determine dose delivered to the unprotected areas (not covered by a lead apron) such as the head, neck and hands?

If your answer to either of the above questions is "Yes", staff should consider wearing supplementary dosimeters. To monitor the head or eyes, an additional dosimeter is worn outside the lead apron at the neck level or on a head band. Doses delivered to hands during x-ray procedures can also be monitored by wearing a dosimeter(s) on the wrist or wearing special ring dosimeters on the fingers. Higher doses are permitted for the hands, the skin and the lenses of the eyes than for the body.

When ordering personal radiation dosimeters it is important to correctly designate which body area each dosimeter will be worn on. For information on approved dosimetry service providers and on the selection and care of lead aprons, go to the BC Centre for Disease Control website (www.bccdc.ca).

When storing a personal radiation dosimeter at the end of the work day/shift, it is advised to leave the dosimeter in a dark control area away from room lights, sunlight and excessive heat. Do not store dosimeters inside the x-ray room or with radionuclides.

When changing a personal radiation dosimeter, ensure careful and clean handling of the dosimeter card to avoid damage. Minimize the time during which the dosimeter card is exposed to direct light. Assemble the dosimeter in a clean environment free of dust and possible contaminants such as food or drink. Never apply a name label or other adhesive materials to the dosimeter card as this will cause damage. Ensure the dosimeter holder is in good condition.

*Note: If doses exceed or may exceed 1 mSv/year, the employer must establish an exposure control plan for the workers. The exposure limit for workers under the regulation is 20mSv/year. The regulation also references Health Canada's [Safety Code 28](#), "*Radiation Protection in Veterinary Medicine, Recommended Safety Procedures for Installation and Use of Veterinary X-Ray Equipment*" for specific guidance on protecting veterinary staff.

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