



Facts

Radiation in Veterinary Medicine



Diagnostic radiology is an essential part of present-day veterinary medicine. While there are benefits to the animal being x-rayed, precautions must be taken to reduce the possible harmful effects of ionizing radiation to the operator.

NDS - National Dosimetry Services

The Risks

During an average veterinary radiological examination, the radiation dose received by an operator is generally low. The body's defence mechanisms act upon exposed cells in an attempt to repair any damage. While an individual's immune system, age, or sex may dictate the speed and effectiveness of the body's ability to repair cells, exposure to ionizing radiation, even at low doses, may cause irreversible damage. Therefore, the effect of even low levels of ionizing radiation may accumulate and could represent a potential health hazard.

If you would like to learn more about radiation effects on the human body or to review recommended safety procedures, you can visit the following Web sites:

Title: Understanding Radiation
Author: Canadian Nuclear Safety Commission
Web site: http://www.nuclearsafety.gc.ca/pubs_catalogue/uploads/INFO-0172-1_E.pdf

Title: Radiation Protection in Veterinary Medicine- Recommended Safety Procedures for Installation and use of Veterinary X-Ray Equipment – Safety Code 28

Author: Radiation Protection Bureau
Web site: http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/91ehd-dhm151/index_e.html



Canadian Veterinary
Medical Association
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Safeguarding Your Health

Veterinary workers can minimize exposure risks by following documented safety procedures and using radiation monitors. Dosimeters are small devices that monitor an individual's exposure to x-ray, beta, and gamma radiation. Dosimeters are worn for a specified period of time and then returned for processing and analysis. An exposure report is generated that identifies any radiation exposure incurred during the wearing period.

There are several reasons why a veterinary worker should wear a dosimeter:

- ❖ ***To detect faulty equipment and gaps in safety practices.*** Radiation exposure data can indicate problems with x-ray equipment, operational procedures, and employee workload.
- ❖ ***To verify that dose limits are not exceeded.*** Each province determines the maximum level of radiation exposure per individual. Exposure reports provide a record that helps ensure individuals do not exceed these limits.
- ❖ ***To obtain a lifelong dose history.*** Individuals have access to a personalized dose record which indicates their accumulated radiation exposure over a career.
- ❖ ***To monitor pregnant workers.*** There are greater exposure risks during pregnancy when fetal cells are developing and multiplying. Dosimeters can be used as a dose management tool to monitor and minimize a pregnant worker's exposure to radiation.

The National Dosimetry Services > A Measure of Safety

The National Dosimetry Services (NDS) is Canada's leading dosimetry provider. NDS offers a full-line of dosimetry products and services that are tailored for the specific monitoring needs of the veterinary market. NDS is committed to providing accurate, high quality and reliable radiation exposure assessments; timely emergency response protection; and outstanding customer service.

If you would like to learn more about the products and services offered by NDS, please call our toll-free customer service line at **1-800-261-6689** or visit us on the Web at: www.healthcanada/nds.

The Canadian Veterinary Medical Association (CVMA) supports the implementation of radiation protection programs and the use of dosimeters in veterinary medicine for the health and safety of veterinary professionals.