RADIOACTIVITY AND X-RADIATION

586 Survey of X-Ray Protection Practices Among Michigan Veterinarians.
G.A. Jacobson and D.E. Van Farowe.
J. Am Vet. Med. Assn. 145, 793-797 (Oct. 15, 1964).

Each time a radiographic or fluoroscopic unit is turned on, there is some risk of genetic damage or carcinogenic effects. Therefore, every effort should be made to reduce exposure of the operator wherever possible. According to a survey of veterinary radiologic equipment in use in Michigan, a high percentage of units did not have adequate aluminum filtration or cones that would confine the beam to the area of diagnostic interest. As a result, the scatter radiation dose to the operator was much higher than necessary for each radiograph taken. Twenty-five illegal hand-held fluoroscopes were found in use, and protective gloves and aprons were lacking in several animal hospitals. Few establishments used film badges or other devices to monitor radiation exposure. In addition to faulty equipment, a number of potentially dangerous procedures existed. Although veterinarians were aware of the dangers in using radiographic equipment carelessly and understood control techniques, many did not apply this knowledge to everyday practice. A visit was made to each veterinarian's office or hospital where a registered x-ray or fluoroscopic machine was located, and each unit was physically inspected and the radiation measured. Then the owner was sent a letter listing the necessary changes that would reduce over-all radiation exposure.
-- Public Health Eng Abstr

587 On the Retention of Cesium-137 in People. M.A. Van Dilla
Health Phys. 11, 21-22 (Jan. 1965).

Cesium-137 retention following four cases of accidental contamination was measured as a function of time in the Los Alamos human spectrometer and counter. Inhalation was the primary route in at least three of these exposures. A simple exponential function fits the data well, the biological half-time averaging 129 days. There are 7 references.
-- Public Health Eng. Abstr

588 The Cesium-137 Content of Beef from Dairy and Feed-Lot Cattle G.M. Ward and J.E. Johnson
Health Phys. 11, 95-100 (Feb. 1965).

Samples of meat were collected from producing dairy cows, dry cows, young calves, and feed-lot fattened cattle and analyzed for Cs-137, potassium, fat and moisture. The diets which were contaminated with varying levels of fallout were analyzed to estimate daily intake of the nuclide. The Cs-137 levels/kg of edible meat leveled off at less than 1% of the daily intake in mature dairy cattle, at 3% in feed-lot cattle, and at 15% in calves. It is not clear whether differences are due to age or the diet of the animals. The ratio of activity meat, milk/kg, ranged from 1.2 to 4.9. It is estimated that the average consumer will obtain more Cs-137 from milk than beef, although under certain conditions the reverse could easily occur.
-- APCA Abstr

589 Rehabilitation of a Radioactive Building. H C Hans
Public Health Repts 79, 829-835 (Sept. 1964).

The restoration of a contaminated building is described. This was a cancer clinic that had become contaminated through decades of radium therapy. Activity from radon needles and contaminated waste had spread over the entire building in the form of surface contamination and imbedded needles. The radiation hazard was removed by a prescribed procedure consisting of a thorough survey to mark off contaminated areas, detailed vacuuming, scrubbing, mopping and rinsing operations, floor sealing and retiling, and installation of false walls and ceilings to prevent paint peelings from introducing subsequent contamination. Complete decontamination was assured in a final survey.
-- Public Health Eng Abstr