

***PET Shielding***

- A. Some physicists are calculating shielding requirements for PET facilities without taking into account the radiation absorbing characteristic of the patient's body – a major factor in the real world of radiation protection. Similarly, some physicists are calculating shielding requirements for protection of the public in areas where the public is restricted from going. This happens because they are treating the injected patient as though they are the public for whom the shielding is being designed. In fact the injected patient is the source of the radiation.
- B. Many architects do not involve the radiation physicist until the facility design is completed. With the use of high energy PET radioisotopes, the room layout can be critical in forcing the shielding plan to require larger amounts of lead shielding than might otherwise be required. In fact, some walls/doors might even not require lead if the layout were slightly different. Three important considerations in the design are the public locations, patient route/location post-injection, and the technologists' routine working patterns.
- C. We have become aware of shielding plans developed by some physicists for PET facilities that called out everything from 16 pound lead per square foot of surface area (1/4" thick) all the way up to 30 pound lead (1/2" thick). Consider the floor loading of these examples!!!

**Please, if you are ever asked to provide shielding in excess of about 8 pound per square foot for anything other than a therapy installation, you are strongly encouraged to contact us for a review of the situation. Remember smart design first equals less expensive construction later.**