It is clear that exposure to x-rays and other types of radiation is increasing in the workplace. The United States has the highest exposure rate of radiation and x-rays in the entire world. With services such as dental, surgery, and routine exams becoming more widespread and common, so does the exposure of ionizing radiation in the workplace. Now more than ever it is imperative to take proper precautions when dealing with radiation exposure in the workplace.

1. WHAT IS A DOSIMETER BADGE?
Commonly referred to as a “radiation badge”, “TLD badge”, “personal dosimeter”, or “radiation tag”, a dosimeter simply monitors your exposure to radiation in the workplace. Whether you are conducting dental x-rays on a chihuahua or performing surgery on a prized thoroughbred your dosimeter will record your level of exposure to the dangerous ionizing radiation being emitted. A common misconception about a dosimeter is that it will protect from exposure or will absorb and retain radiation. However, fast flying radiation particles simply pass through the device and the dosimeter records the exposure. A dosimeter is not hazardous.

2. WHEN DO I WEAR A DOSIMETER BADGE?
A badge should be worn at all times while in a facility that has a radiation source. The dosimeter monitors exposure of ionizing radiation, which is harmful to the human body and the badges are commonly worn on the chest or collar area. The whole body badge should be positioned so that the label is pointed outward without obstruction, i.e. not in your pocket! If an employee is pregnant she will be monitored monthly.

3. WHAT IS A CONTROL BADGE?
This badge is just like any other dosimeter but is labeled as the “control badge” for a specific purpose. Its sole purpose is to measure radiation during the transit process to and from your facility. When your badges arrive at your hospital the control badge is to be stored AWAY FROM THE RADIATION SOURCE! It is not to be used as an “area monitor” which monitors the scatter dose in a room. If the control badge is constantly being exposed to radiation in the exam room your dosimetry report will reflect an inaccurate reading.

4. WHAT DOES A DOSIMETER MEASURE?
In the field of radiation safety, a dosimeter badge measures the exposure of ionizing radiation that is emitted while in your workplace. It measures x-rays, beta, gamma, and neutrons and reports of your exposures are recorded quarterly, annually and throughout your lifetime. The government has specified limits a person can be exposed to while in a given year and throughout your lifetime. While it is rare to meet exposure limits, it is still wise to measure and record your radiation exposure for potential health risks which can develop over time.

5. HOW DO TLD’S WORK?
The most common type of radiation dosimeter is the TLD, which stands for thermo luminescent dosimeter. When a TLD badge is exposed to ionizing radiation the elements inside the dosimeter react in a certain manner depending on the level of exposure. When the dosimeters are read in a laboratory they are exposed to heat and light. The science behind dosimetry gives an accurate reading of radiation exposure to that specific badge.

Hopefully this answers some of the questions that come to mind when dealing with radiation safety in the workplace. Dosimetry badge service creates a responsible workplace while keeping the employees safely monitored. For more information on this subject or to get started with dosimeter badge service checkout: www.dosimeterbadge.com/midwest