

Opinion





# Biosafety in dental radiology: are we all protected?

### **Opinion**

Biosafety consists of a set of actions aimed at preventing, reducing or eliminating the risks inherent in research and service activities, which may endanger the health of the environment, animals or individuals. Despite the awareness of dental surgeons, there is still a great deal of concern with dental radiology, which, because it is not associated with cutting instruments, presence of blood, is not usually associated with the need to control infection. However, the transmission of infectious diseases is possible due to the contamination of materials and equipment used to obtain intra and extraoral radiographs. It is of fundamental importance that, even knowing that health care workers are not at risk during the radiographic examination, since it is considered a non-invasive procedure, this should not be a reason for disregard for the protection standards for infection control. Since it is possible to infect patients from infections transmitted directly or indirectly.

The potential that ionizing radiation that can cause somatic or genetic changes to humans has led to the emergence of essential preventative means to prevent risk-taking professionals, patients and staff. It is emphasized that many laws were created with the purpose of minimizing doses resulting from exposures in diagnostic radiology.

Several authors have evaluated the attitudes of dental professionals in relation to radiological protection in many countries. However, there is scarcity in the literature. In view of this finding and the importance of the subject for the health of patients and professionals involved in radiographic examinations, it is considered necessary and important to develop a study that investigates whether dental offices are following the law that governs radiological protection. Concern about the risks of radiation and the quality of the radiographic image has led many researchers to carry out studies on the subject.

Most dental radiology books guide the prevention of both the patient and the professional, as well as the work environment. The need to take care of calibration of equipment, filtration, collimation, use of open cylinders, ultra fast films and the use of lead protectors is unanimous. Disposal of materials and substances used in the radiological practice deserves special attention, lead slip, developer and fixed can contaminate the soil and sometimes the groundwater. It is the duty of the professionals to know about the disposal and how to do it properly, but what we observe is the opposite, lack of knowledge and disregard for the situation by the organs that should

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be concerned with the disposal of substances that may come to attack the environment.

Knowledge of the technique and its good performance, as well as the care with film development and fixing are essential procedures to avoid repetition. Most dental surgeons do not care about the quality of radiographs, performing over-exposed or under-processed radiographs and thus leading the patient to take unnecessary doses of radiation. Biosafety in radiology in infection control or radiation control should be better demanded by students in dentistry courses, as well as by competent bodies during professional practice in public and private practices. Being very important and even fundamental the knowledge of dental surgeons about the risks they are exposed and how to prevent themselves, becoming able to contribute to the promotion of health and well being of all. Clinical protocols for the use of x-ray devices and manipulation of materials related to radiographic shots should be institutionalized in order to optimize the biosafety of academics and patients.

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