# Radiation Risk Assessment

This risk assessment deals primarily with the risks associated with radiographic equipment and radiation in the dental practice. The practice has also carried out a separate Health and Safety risk assessment.

## The regulations covered by this risk assessment are the Ionising Radiations Regulations 1999.

|  |  |
| --- | --- |
| **Location:** |  |
| **Date:** |  |
| **Inspection carried out by:** |  |

The following risk assessment is an accurate reflection of the radiation protection arrangements at these premises. I understand that I should consult with appointed RPA when necessary.

|  |  |
| --- | --- |
| **Employer:** (signature) |  |

**Risk Assessment Review**

A review of this risk assessment will be undertaken at regular intervals *[at least every 5 years or whenever there are significant changes to radiographic equipment, working methods or introduction of new legislation]*. A copy of each review is kept on file.

The next review will take place on or before *[date]*.

*Examples to be adapted and supplemented as required are included in the form below for information.*

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| --- | --- | --- | --- | --- | --- | --- |
| **What are the hazards?** | **Who might be harmed and how?** | **What are you already doing?** | **What further action is necessary / recommended?** | **Action**  **by whom** | **Action**  **by when** | **Done** |
| Over-exposure to radiation | Patients and staff. Overexposure during radiographic examination due to equipment failure or staff error. | Equipment subject to regular testing and maintenance.  Equipment is of suitable quality to ensure radiation doses are as low as reasonably practicable.  Collimation and fast film speeds used.  Diagnostic reference levels in accordance with national DRLs in place and adhered to.  Contingency plans in place.  Only entitled staff may carry out tasks related to radiography.  Staff training and CPD. |  |  |  |  |
| Total yearly exposure exceeds practice dose investigation level. | Staff. Exposure greater than dose investigation level due to large volume of examinations carried out. | Dose investigation level set.  Personal dosimetry will be carried out if estimated annual dose exceeds 1 mSv.   1. Number of films per week 2. Number of work weeks/year 3. Estimated max dose per radiograph to staff at 2m from tube and patient outside main beam = 0.125 µSv   Estimated max annual dose  A x B x C = | A formal review of working conditions will be undertaken if results of personal dosimetry suggest annual dose exceeds the dose investigation level to ensure that exposure to radiation is restricted as far as reasonably practicable. |  |  |  |
| Accidental exposure to radiation | Staff, patients and members of the public. Unintended exposure to radiation due to mis-identification, equipment failure, staff error or inadequate shielding. | Patient identification procedure in place.  Controlled area defined.  Only patient allowed in controlled area when x-ray beam is activated.  If parent or carer is required to stay in controlled area during exposure, they will be informed of the risks and issued with a lead apron. |  |  |  |  |
| Additional exposure to radiation | Patients. Poor image quality or processing resulting in clinically unacceptable x-ray images and retakes are required. | Regular maintenance and testing of processing equipment.  Quality assurance programme monitors image and processing quality.  Clinical audit and peer review. |  |  |  |  |
| Unnecessary exposure to radiation | Patients. Radiographic examination undertaken unnecessarily i.e. previous radiographs were sufficient for patient’s treatment | Full clinical history and exam required before referral for radiography.  Justification and authorisation required before exposure. |  |  |  |  |
| **Other comments** | | | | | | |
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