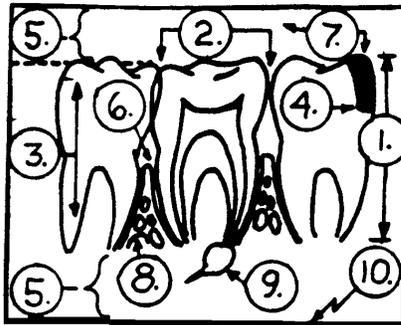


## Q.A. Collectibles

*Sponsored by CRCPD's Committee on Quality Assurance  
in Diagnostic X-Ray (H-7)*

### Make it Easy for Yourself A Checklist Guide for Quality Intraoral Radiographs

The following collectible was originally published in October 1988. In updating this collectible, we want to emphasize the idea that this collectible is for assisting the inspector by providing information. The Committee on Quality Assurance is not in the business of encouraging inspectors to critique films while they are at a facility.



1. Regardless of the distinctive information between bitewing and periapical studies, correct vertical angulation is essential. Use tube/film alignment instruments to avoid elongating or foreshortening image. This will reduce distortion as well as give proper orientation of structures within the film.
2. Attenuation to proper horizontal angulation will minimize overlapping of images. Check patient with mirror to assess tooth rotation and adjust contact angulation to the buccal-bone plane.
3. Paralleling technique not only means that the dental structures are parallel (therefore, not absolutely intimate) to the film plane, but the central ray is to be perpendicular to both. The use of a long cone is a valuable advantage for this purpose. Rectangular cones are an even greater refinement.
4. The bitewing's low angle of 7-15° is valuable to reveal carious areas concealed on the interproximal surfaces, particularly the posterior teeth who's buccal-lingual diameters are wide.
5. For periapicals, show the complete occlusal plane near the film top edge. This will allow at least 3 mm of bone image to show full apical coverage. If areas of pathology are not surrounded by normal structures on the film, then consider supplementary views, i.e. occlusals, laterals, or panographs.

6. For bitewings on patients with periodontic involvement, consider vertical film placement to assure demonstrating the interproximal bone height.
7. Correct exposure selection will reveal the full spectrum of subject densities. Films should demonstrate nearly black through the cheek above the occlusal plane, to nearly white through metal. Only correct exposure selection and complete development can accomplish this.
8. The perception of image clarity and sharpness (often most evident in the mandibular trabecular pattern) is the ability to discern objects that are either small or distinct. Their contrast can be accentuated by (a) low kVp with proper mA/time selection, (b) long cones, (c) the absence of motion, and most importantly (d) optimum processing.
9. Faithful image recording: today's fine film emulsions are capable of optically resolving objects as small as 5 to 8 line-pairs per millimeter. Complete and controlled photo-development is the single weakest link in the entire imaging modality. It is almost impossible to over-emphasize the vital importance of (a) correct and accurate chemical temperature (obtain and use a dial or digital thermometer), (b) constant and frequent chemical replenishment and changes, (c) continual mechanical maintenance according to manufacturer's guides.

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