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The use of dental radiographs

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TABLE 1

U.S. Food and Drug Administration guidelines for prescribing dental radiographs.*

The recommendations in this table are subject to clinical judgment and may not apply to every patient. They are to be used by dentists only after reviewing the patient's health history and completing a clinical examination. Because every precaution should be taken to minimize radiation exposure, protective thyroid collars and aprons should be used whenever possible. This practice is strongly recommended for children, women of childbearing age and pregnant women.

TYPE OF ENCOUNTER	PATIENT AGE AND DENTAL DEVELOPMENTAL STAGE				
	Child With Primary Dentition (Prior to Eruption of First Permanent Tooth)	**Child With Transitional Dentition (After Eruption of First Permanent Tooth)**	**Adolescent With Permanent Dentition (Prior to Eruption of Third Molars)**	**Adult, Dentate or Partially Edentulous**	**Adult, Edentulous**
New Patient† Being Evaluated for Dental Diseases and Dental Development	Individualized radiographic examination consisting of selected periapical/occlusal views and/or posterior bitewings if proximal surfaces cannot be visualized or probed; patients without evidence of disease and with open proximal contacts may not require a radiographic examination at this time	Individualized radiographic examination consisting of posterior bitewings with panoramic examination or posterior bitewings and selected periapical images	Individualized radiographic examination consisting of posterior bitewings with panoramic examination or posterior bitewings and selected periapical images; a full-mouth intraoral radiographic examination is preferred when the patient has clinical evidence of generalized dental disease or a history of extensive dental treatment		Individualized radiographic examination, based on clinical signs and symptoms
Recall Patient† With Clinical Caries or at Increased Risk of Developing Caries‡	Posterior bitewing examination at six- to 12-month intervals if proximal surfaces cannot be examined visually or with a probe			Posterior bitewing examination at six- to 18-month intervals	Not applicable
Recall Patient* With No Clinical Caries and Not at Increased Risk of Developing Caries‡	Posterior bitewing examination at 12-to 24-month intervals if proximal surfaces cannot be examined visually or with a probe		Posterior bitewing examination at 18- to 36-month intervals	Posterior bitewing examination at 24- to 36-month intervals	Not applicable
Recall Patient† With Periodontal Disease	Clinical judgment as to the need for and type of radiographic images for the evaluation of periodontal disease; imaging may consist of, but is not limited to, selected bitewing and/or periapical images of areas in which periodontal disease (other than nonspecific gingivitis) can be demonstrated clinically				Not applicable
Patient for Monitoring of Growth and Development	Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of dentofacial growth and development		Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of dentofacial growth and development; panoramic or periapical examination to assess developing third molars	Usually not indicated	
Patient With Other Circumstances Including, but not Limited to, Proposed or Existing Implants, Pathology, Restorative/ Endodontic Needs, Treated Periodontal Disease and Caries Remineralization	Clinical judgment as to need for and type of radiographic images for evaluation and/or monitoring of these conditions				

* Reprinted from U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration; and American Dental Association, Council on Dental Benefit Programs, Council on Scientific Affairs.[5]

† Clinical situations for which radiographs may be indicated include, but are not limited to, the following. **Positive historical findings:** Previous periodontal or endodontic treatment, history of pain or trauma, familial history of dental anomalies, postoperative evaluation of healing, remineralization monitoring, presence of implants or evaluation for implant placement. **Positive clinical signs/symptoms:** clinical evidence of periodontal disease, large or deep restorations, deep carious lesions, malposed or clinically impacted teeth, swelling, evidence of dental/facial trauma, mobility of teeth, sinus tract ("fistula"), clinically suspected sinus pathology, growth abnormalities, oral involvement in known or suspected systemic disease, positive neurologic findings in the head and neck, evidence of foreign objects, pain and/or dysfunction of the temporomandibular joint, facial asymmetry, abutment teeth for fixed or removable partial prosthesis, unexplained bleeding, unexplained sensitivity of teeth, unusual eruption, spacing or migration of teeth, unusual tooth morphology, calcification or color, missing teeth with unknown reason, clinical erosion.

‡ Factors increasing risk for caries may include, but are not limited to, the following: high level of caries experience or demineralization, history of recurrent caries, high titers of cariogenic bacteria, existing restoration of poor quality, poor oral hygiene, inadequate fluoride exposure, prolonged nursing (bottle or breast), diet with high sucrose frequency, poor family dental health, developmental or acquired enamel defects, developmental or acquired disability, xerostomia, genetic abnormality of teeth, many multisurface restorations, chemotherapy/radiation therapy, eating disorders, drug/alcohol abuse, irregular dental care.