Drug Abuse Considerations for the Dental Practitioner
Dan Jenkins, DDS
Objectives: Present an overview of the scope of prescription drug abuse in Nevada and in the USA • Present alternatives to opiates for pain control post dental procedures • Present information on the CDC Drug Take Back program • Discuss: 1) popular abuse drugs and abuse statistics; 2) drug abusers modus operandii; 3) reasons for concern – statistics, stories, deaths; 4) sources of drugs; 5) are opioids necessary for dental pain? 6) message from ADA President; 7) end results of abuse; 8) history of drugs in America; 9) “Pain Clinics”; 10) Prescription Monitoring Program (PMP); 11) National Drug Take Back Days

Infection Control Guidelines for the Dental Healthcare Setting / OSHA Guidelines
Andi Irons, BA, RDH
Objectives: Review background • Describe personnel health elements • Discuss bloodborne pathogens • Demonstrate hand hygiene • Review personal protective equipment • Explain latex hypersensitivity/contact dermatitis • Define sterilization and disinfection • Analyze environmental infection control • Discuss dental unit waterlines • Explain special considerations • Program evaluation/risk assessment • Review OSHA guidelines

Dental Law & Ethics
Daniel Orr, II, DDS, PhD, JD, MD
Objectives: Discuss details of the dental practice act • Learn about healthcare fraud and the False Claims Act • Review statutes and regulations that govern the practice of dentistry • Advocate standards of care to avoid liability

Advanced Dental CE is dedicated to providing quality dental continuing education courses at a low cost for the whole dental team which might be needed for relicensure. We currently offer courses in Infection Control, OSHA, Drug Regulations & Abuse, and Dental Law.

For more information visit our website: AdvancedDentalCE.org
Contact us to find a course in your area or to schedule one in your area.
Dan Jenkins, DDS djenkinsdds@yahoo.com
Shayna Laughman AdvancedDentalCourses@gmail.com
702-906-5802

https://mail.google.com/mail/u/0?ui=2&ik=34d42456e9&view=pt&search=inbox&th=1584a793d0940bb7&siml=1584a793d0940bb7
Utah Valley Dental Assisting
Radiology Lesson Outline

Textbook: Essentials of Dental Radiography for Dental Assistants and Hygienists. 9th edition
Authors: Evelyn M. Thomas and Orlen N. Johnson

Textbook: Modern Dental Assisting 10th edition
Authors: Debbie Robinson and Doni L. Bird

In accordance with R156-69-603 (11) Use of Unlicensed Individuals as Dental Assistants. (11)(i)(ii) expose radiographs without meeting the following criteria: (i) the DANB Radiation Health and Safety Examination (RHS); or (ii) a radiology exam approved by the Board that meets the criteria established in Section R156-69-604. And in accordance with Section 58-69-803 and Subsection 58-54-4.3(2), the radiology course in Subsection R156-69-603(11) shall include radiology theory consisting of:

(1) Orientation to radiation technology
   A. Introduction to radiology and discovery
   B. Historical perspective and radiation basics
   C. Parts and components of x-ray machine and tubehead

(2) Terminology
   A. X-Ray terminology and definitions
   B. Dental x-ray parts and terminology

(3) Radiographic dental anatomy and pathology (cursory)
   A: Radiographic anatomical landmarks
   B: Recognizing head and neck anatomy vs. artifacts
   C: Understanding of basic anatomy and recognizing areas of pathology

(4) Radiation physics (basic)
   A: Basic Principles of ionization and electromagnetic radiation
   B: Properties of X-rays

(5) Radiation protection to patient and operator
   A: Personal protective equipment (PPE) in radiographic procedures
   B: Uses of lead apron, thyroid collar and image receptor holding devices
(6) Radiation biology including interaction of ionizing radiation on cells, tissues and matter
   A: Types of x-ray radiation
   B: Effects of radiation
   C: Interaction of x-rays with matter

(7) Factors influencing biological response to cells and tissues to ionizing radiation and cumulative effects of x-radiation
   A: Effects of radiation exposure
   B: Theories of biological effects

(8) Intraoral and extraoral radiographic techniques
   A: Introduction to intraoral and extraoral radiography
   B: Intraoral and extraoral techniques and errors
   C: Preferred methods depending on type of image receptor and area of exposure
   D: Digital image receptors
   E: X-ray machines for extraoral purposes

(9) Processing techniques including proper disposal of chemicals
   A: OSHA, EPA regulations, (MSDS) information
   B: Safe handling of chemicals and materials used in radiographic procedures and proper disposal of film packaging materials, proper disposal of chemicals

(10) Infection control in dental radiology
   A: Guidelines for infection control in radiographic procedures; proper and safe handling techniques
   B: Personal Protective Equipment (PPE) guidelines and protocol in radiographic procedures for infection control
Radiology Exam Questions

Textbook: Essentials of Dental Radiography for Dental Assistants and Hygienists. 9th edition
Authors: Evelyn M. Thomas and Orlen N. Johnson

Textbook: Modern Dental Assisting 10th ed
Authors: Debbie Robinson and Doni L. Bird

Written By: Gabriela Barsh RDH, BSDH and Dr. Benjamin Hilton, D.D.S.

In accordance with R156-69-603 (11) Use of Unlicensed Individuals as Dental Assistants.
(11)(i)(ii) expose radiographs without meeting the following criteria: (i) the DANB Radiation Health and Safety Examination (RHS); or (ii) a radiology exam approved by the Board that meets the criteria established in Section R156-69-604;

Sources:

(1-10) Label the Parts of the Tubehead: Cathode, Anode, Position Indicating Device, Filament Circuit, Insulating Oil, Metal Housing, Aluminum Disks, Lead Collimator, Tubehead seal, Unleaded glass window of x-ray tube

X-ray Tube

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
(11) Who discovered the first x-ray? (pg 2 Essentials of Dental Radiography)
A: Rother
B: Roentgen
C: Rothesburger
D: Riley

(12) What does ALARA mean? (pg 58,71 Essentials of Dental Radiography)
A: As Low As Reasonably Achievable
B: As Long As Radiation Allows
C: As Long As Reasonably Achievable
D: As Low As Reasonably Allowed

(13) When exposing a Mandibular occlusal radiograph you can: (pg 218 Essentials of Dental Radiography)
A: Never use the thyroid collar
B: Modify the thyroid collar
C: Use the thyroid collar
D: B and C
E: None of the Above

(14) Before exposure of radiographs, which of the following items do patients need to remove? (PG 1165 Modern Dental Assisting)
A: Retainers or partial dentures
B: Glasses
C: Tongue rings
D: Earrings
E: All of the Above

(15) The thyroid collar can protect which of the following? (Page 65 Essentials of Dental Radiography)
A: The thyroid gland
B: Radiosensitive tissues
C: A and B
E: None of the above

(16) Performing an inspection of the oral cavity to note obstructions prior to taking radiographs includes inspection of the following except: (pg 15 Essentials of Dental Radiography)
A: Tori
B: Shallow palate
C: Exocytosis
D: Dental torus
(17) When using digital radiography and during patient positioning, adjust headrest to position patient's head so that the occlusal plane is parallel to the floor and the midsagittal plane (midline) is ________ to the floor. (pg 102 Essentials of Dental Radiography)
A: Parallel
B: Perpendicular
C: Horizontal
D: Vertical

(18) A periapical radiograph can be taken using this type of technique: (pg 164 Essentials of Dental Radiography)
A: Paralleling Technique
B: Bisecting Technique
C: Triangular Technique
D: A and B Only
D: All of the Above

(19) A bitewing can also be referred to as an________ (pg 148 Essentials of Dental Radiography)
A: Interperio radiograph
B: Interproximal radiograph
C: Angular radiograph
D: Intracaries radiograph

(20) On most patients, how many bitewings are taken on an adult as opposed to a child under 12 yrs of age. (Pg 1135 Modern Dental Assisting)
A: Adult 2, Child 4
B: Adult 4, Child 3
C: Adult 4, Child 2
D: Adult 4, Child 4

(21) A bitewing is used for caries detection as well as to examine crestal bone in patients with: (Pg 148 Essentials of Dental Radiography)
A: Inferior alveolar nerve
B: Periodontal disease
C: Alveolar disease
D: Gingivitis

(22) Occlusal radiographs with a size #4 film, may be used when conditions occur, such as: (pg 148 Essentials of dental radiography)
A: Cysts
B: Supernumerary teeth (extra)
C: Impacted teeth
D: All of the above
(23) Which intraoral technique is more likely to satisfy the shadow casting requirements? (pg 149 Essentials of dental radiography)
A: Bisecting Technique
B: Paralleling Technique
C: Bitewing Technique
D: Periapical Technique

(24) The size of the image receptor selected depends on: (pg 150 Essentials of dental radiography)
A: Age of the patient
B: Shape of a patient’s dental arch
C: Patient’s ability to tolerate image receptor
D: Presence of unusual conditions or anatomical limitations
E: All of the above

(25) When a patient has periodontal involvement with moderate bone loss, which type of bitewing would you most likely take? (Pg 150 Essentials of Dental Radiography)
A: Vertical bitewings
B: Horizontal bitewings
C: Periapical bitewings
D: Triangular bitewings

(26) A minimum of ___ bitewings and ___ periapical radiographs make up a full mouth series with 18 radiographs (FMX) (pg 150 Essentials of dental radiography)
A: 6, 12
B: 4:10
C: 4:14
D: 8:10

(27) What is the processing order of an xray? (pg 84 Essentials of Dental Radiography)
A: Development, Rinsing, Fixing, Washing, Drying
B: Development, Fixing, Rinsing, Washing Drying
C: Development, Rinsing, Fixing, Drying, Washing
D: Development, Rinsing, Drying, Fixing, Washing
(28) What is radiopaque in this image? Circle All that apply (pg 1143 Modern dental assisting)
A: Bone
B: Enamel
C: Pulp Chamber
D: Dentin
E: Air Space

(29) What is radiolucent in this image? (pg 1143 Modern dental assisting)
A: Bone
B: Enamel
C: Pulp Chamber
D: Dentin
E: Air Space

(30) ______ is the degree of darkness in a radiograph. (pg 33 Essentials of Dental Radiography)
A: Contrast
B: Wavelength
C: Opacity
D: Density

(31) ______ refers to the many shades of gray that separate the dark and light areas. (Pg 34 Essentials of Dental Radiography)
A: Contrast
B: Wavelength
C: Opacity
D: Density
(32) In the case of periapical radiographs, the embossed identification dot should be positioned toward______. (pg 152 Essentials of Dental Radiography)
A: The occlusal
B: The anterior
C: The midline
D: The posterior

(33) When taking periapicals in the anterior region with the film packet, phosphor plate, or digital sensor, the longer dimension is placed? (pg 152 Essentials of Dental Radiography)
A: Horizontally
B: Inversely
C: Shorter
D: Vertically

(34) A _______ KvP produces a _______ contrast and many shades of gray. (pg 35 Essentials of dental radiography)
A: Lower, Higher
B: Higher, Lower
C: higher, higher
D: lower, lower

(35) What produces film fog? (pg 35 Essentials of dental radiography)
A: Scatter radiation
B: Heat and Humidity
C: Underexposure
D: Cone cutting

(36) An under or overexposed film will result in diminished or poor_______. (pg 35 Essentials of dental radiography)
A: Contrast
B: Density
C: KvP
D: Wavelength

(37) In the case of periapical radiographs, the embossed identification dot should be positioned toward______. (pg 152 Essentials of Dental Radiography)
A: The occlusal
B: The anterior
C: The midline
D: The posterior
(38-47): Match the technique or film processing errors in the following images.

- Conecut 41
- Bent Film 44
- Nose Ring 46
- Elongation 42
- Underexposure 39

- Double Exposure 43
- Partial 38
- Thyroid collar 40
- Overprocessed 45
- Not undergone Washer 47
(48-51) Matching (pg 1171 Modern dental assisting)
48. Scatter Radiation B
49. Cephalostat D
50. Extraoral Radiographs C
51. Magnetic Resonance Image (MRI) A

A: Used for obtaining cross-sectional images without exposing patients to x-rays, good for evaluation of soft tissue.
B: X-rays that bounce off bones and teeth
C: Used to detect fractures, lesions, diseases of the jaws, impacted teeth and TMJ disorder
D: A special device that allows the operator to easily position both film and patient

(52-59) Matching (pg 11 Essentials of dental radiography)
52. Absorption H
53. Electromagnetic Radiation A
54. Photons C
55. Electromagnetic Spectrum B
56. Frequency D
57. Velocity F
58. Soft Radiation E
59. Hard Radiation G

A: Is the movement of wavelike energy through space as a combination of electric and magnetic fields.
B: Radiations are arranged in an orderly fashion according to their energies
C: Are bundles of energy that travel through space at the speed of light.
D: Is a measure of the number of waves that pass a given point per unit of time
E: Grenz rays; limited penetrating power
F: Refers to the speed of the wave.
G: Radiation with great penetrating power
H: Refers to the process of transferring the energy of the x-rays to the atoms of the material through which the x-ray beam passes.

(60) If the PID is tilted upward to direct the X-rays toward the top, they are called _____ angulations. If the positioning of the central ray (PID) towards the floor generally used for bitewings and PA’s of the maxillary arch are called _____ angulations. (pg 153 Essentials of Dental Radiography)
A: Positive, Negative
B: Negative, Positive
C: Negative, Negative
D: Positive, Positive
(61) In the paralleling technique, the image receptor (film packet, phosphor plate or digital sensor) is placed _______ to the _______ axis of the tooth being radiographed. (pg 162 Essentials of Dental Radiography)
A: Parallel, Long
B: Parallel, Short
C: Perpendicular, Long
D: Perpendicular, Short

(62) If the image receptor cannot be placed parallel to the long axis of a tooth, it will not be possible to direct the central ray perpendicular to the long axis of a tooth. This is often the case with these types of patients, Except: (pg 180 Essentials of Dental Radiography)
A: Edentulous
B: Children
C: Those with large tori
D: Those with a shallow palatal vault
E: None of the above

(63) When vertical angulation is excessive a _______ image will result: (pg 182 Essentials of Dental Radiography)
A: Foreshortened
B: Elongated
C: Conedout
D: Ghost

(64) When vertical angulation is inadequate (less than perpendicular to imaginary bisector, it will result in an/a _______ image. (pg 182 Essentials of Dental Radiography)
A: Foreshortened
B: Elongated
C: Conecut
D: Ghost

(65) Topographical occlusal radiographs may be exposed in which area of the oral cavity? (pg 216 Essentials of Dental Radiography)
A: Anterior and posterior regions of the mandible.
B: Anterior regions of the maxilla
C: Posterior regions of the maxilla
D: A and B only
E: A through C
(66) Radiation is defined as the emission and movement of _____ through space in the form of electromagnetic radiation (x- and gamma rays) or particulate radiation (alpha and beta particles). (pg 10 Essentials of Dental Radiography)
A: Radioactivity
B: Energy
C: Time
D: Amperage

(67) The mental foramen is located in the _______. (pg 1143 Modern dental assisting)
A: Area near first mandibular premolar
B: Area near first maxillary premolar
C: Inferior to the mandibular central incisors
D: Superior to the maxillary central incisors

(68) Where is the lingual foramen? (pg 1143 Modern dental assisting)
A: Area near first mandibular premolar
B: Area near maxillary premolar
C: Inferior to the mandibular central incisors
D: Superior to the maxillary central incisors

(69) A radiopaque area is _____ dense and blocks x-ray photons from reaching image receptor. A radiolucent area is _____ dense an allows more x-ray photons to reach the image receptor. This area is more exposed. (pg 1143 Modern dental assisting)
A: More, less
B: Less, more
C: Not, always
D: None of the above

(70) Computer Tomography are digital and need no film. They are used in dentistry primarily for: (1173 Modern Dental Assisting)
A: Crowns and Bridges
B: Lesions and implant cases
C: Endodontics
D: Orthodontics

(71) _______ time is the interval that the x-ray machine is fully activated and x-rays are produced. (pg 40 Essentials for dental radiography)
A: Radiation
B: Sectional
C: Exposure
D: Frequency
(72) The amount of electric current used in the x-ray machine is expressed in _______.
A: Peak Kilovoltage (pg 40 Essentials of dental radiography)
B: Rads
C: Roentgens
D: mA: milliamperes

(73) The density of the radiograph is affected whenever the milliamperage is changed.
________ the mA (_______) the density of the radiograph. (pg 40 essentials of dental radiography)
A: Increasing, Lightens
B: Decreasing, Darkens
C: Increasing, Darkens
D: Decreasing, Lightens

(74) ______ the mA decreases (__________) the density of the radiograph. (pg 40 essentials of dental radiography)
A: Increasing, Lightens
B: Decreasing, Darkens
C: Increasing, Darkens
D: Decreasing, Lightens

(75) Direct theory: According to the direct theory, x-ray photons collide with important cell chemicals and break them apart by ionization, causing critical damage to large molecules. __________ of biological alterations from x-radiation exposure result from a direct effect. (pg 48 Essentials of Radiography)
A: ⅓ (one third)
B: ⅔ (two third)
C: ½ (one half)
D: ¾ (three-fourths)

(76) Indirect theory (Radiolysis of water): This theory is based on the assumption that radiation can cause chemical damage to the cell by ionizing the water within it __________ of biological alterations from x-radiation exposure result from indirect effects. (pg 48 Essentials of Radiography)
A: ⅓ (one third)
B: ⅔ (two thirds)
C: ½ (one half)
D: ¾ (three-fourths)
(77) A______ describes the changes in hereditary material that do not manifest in the irradiated individual, but in future generations. (pg 49 Essentials of Dental Radiography)
A: Cumulative Effect
B: Radio Effect
C: Genetic Effect
D: Somatic Effect

(78) A______ effect occurs when the biological change or damage occurs in the irradiated individual, but is not passed along to offspring. (pg 49 Essentials of Dental Radiography)
A: Cumulative Effect
B: Radio Effect
C: Genetic Effect
D: Somatic Effect

(79) _______ occurs if exposure is too great and the intervals between exposures are too frequent for the body cells to repair themselves. (pg 49 Essentials of Dental Radiography)
A: Cumulative Effect
B: Radio Effect
C: Genetic Effect
D: Somatic Effect

(80) A nonthreshold dose–response curve indicates that ______ amount of radiation, no matter how small, has the potential to cause a biological response. (pg 49 Essentials of Dental Radiography)
A: No
B: Any
C: Negative
D: None of the above

(81) Following the initial radiation exposure, and before the first detectable effect occurs, a time lag called the _______ occurs. (pg 51 Essentials of Dental Radiography)
A: Recovery Period
B: Period of Injury
C: Latent Period
D: X-ray Period
(82) In__________ certain effects can be observed. One of the effects seen most frequently in growing tissues exposed to radiation is the stoppage of mitosis, or cell divisions. This may be temporary or permanent, depending on the radiation dosage. (pg 51 Essentials of Dental Radiography)
A: Recovery Period
B: Period of Injury
C: Latent Period
D: X-ray Period

(83) ________ occurs following exposure to radiation, where some recovery can take place. This is particularly apparent in the case of short-term effects. (pg 51 Essentials of Dental Radiography)
A: Recovery Period
B: Period of Injury
C: Latent Period
D: X-ray Period

(84) The operator should always stand as far away as practical—at least _____ ft from the head of the patient (the source of scatter radiation) while making the exposure. (pg 67 Essentials of Dental Radiography)
A: 12
B: 6
C: 2
D: 18

(85) The United States Nuclear Regulatory Commission has developed radiation protection guidelines referred to as the__________ for the protection of radiation workers and the general public (pg 70 Essentials of Dental Radiography)
A: Maximum Personnel Dose
B: Maximum Permissible Dose
C: Maximum Person Dose
D: Maximum Permeable Dose

(86) The ________, when in place around the patient's neck, protects the thyroid gland and other radiosensitive tissues in the neck region during exposure of intraoral radiographs. (pg 62 Essentials of Dental Radiography)
A: Collimator
B: Lead Apron
C: Thyroid collar
D: Cathode
(87) Which film speed is the best to use to reduce patient radiation exposure? (pg 72 Essentials of Dental Radiography)
A: D
B: E
C: F
D: V

(88) Who has an ethical responsibility to adopt ALARA? (pg 72 Essentials of Dental Radiography)
A: The dental assistant
B: The dental hygienist
C: The dentist
D: All of the above

(89) ________(s) can be permitted 5 mSv (0.5 rem) per year, or one-tenth the dose permitted radiation workers. (pg 70 Essentials of Dental Radiography)
A: Health Care worker
B: General Public

(90) The maximum permissible dose (MPD) for ________(s) is the same as for other radiation workers. According to these guidelines, the whole-body dose may not exceed 50 mSv (5 rem) per year. (pg 70 Essentials of Dental Radiography)
A: Health Care worker
B: General Public

Extra Credit Question

(91) A _________ radiograph allows your dentist to see the entire structure of your mouth in a single image. All teeth of both the maxilla and the mandible plus the surrounding tissues and supporting bone are imaged. (pg 144 Essentials of Dental Radiography)
A: Bitewing
B: Periapical
C: Occlusal
D: Panoramic