

How safe are dental X-rays and when do they become unsafe? - Smile Solutions

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Dental X-rays play an important role in any dental treatment plan. There are a variety of different examinations, preventative and diagnostic, that allow clinicians a better understanding of each patient's anatomy and needs. Dental imaging helps clinicians diagnose common problems such as gum disease, tooth and gum infections, cavities, and gauge bone density. Without imaging to supplement dental consultations, some conditions may be left undiagnosed and, subsequently, untreated. Dental imaging falls into two categories: intraoral and extraoral. Intraoral examinations are captured inside your mouth. They help clinicians visualise cavities, tooth roots and developing teeth at specific sites with very high detail. Intraoral examinations often include the following imaging: Bitewing X-rays – to check in-between teeth, or assess restorations Periapical X-rays – to gain close-up views of individual teeth, including their roots Occlusal – imaging to assess the bite relationship between upper and lower teeth Extraoral Extraoral examinations are captured outside of your mouth. They cover a larger area and provide great detail of all of your teeth, jaw and oral anatomy in one exposure. Extraoral examinations often include the following imaging: Orthopantomogram (OPG) – a full mouth X-ray Cephalometric imaging – X-rays of the head and facial profile Cone Beam Computed Tomography (CBCT) – 3D X-ray imaging of necessary areas of the face and teeth Great care is taken to ensure dental X-rays are taken only when necessary and are kept to a minimum. This helps keep the radiation dose low should you receive multiple x-rays during your dental treatment. If your dentist requires you to have an X-ray, they will select the most appropriate type of imaging for your needs. If an extraoral radiograph is required, you may be referred to an imaging clinic outside of the dental practice. In these cases, a radiographer will perform your imaging ensuring the exam uses the lowest dose possible while still providing a high-quality image. Radiation safety is taken very seriously with any X-ray examination, including exposure selection, collimation (the precision of the radiation beam) and lead shielding. We are exposed to radiation everyday in our own natural environment. The amount of natural background radiation a person receives is variable and dependent on environmental factors like soil, rock, altitude and latitude in conjunction with your diet. The average amount of background radiation exposure in Australia for any one person currently sits at approximately 1.5 mSv per year from natural sources, a near equivalent to 75 chest X-rays. Conventional 2D dental X-rays emit very small doses of radiation

and are deemed to be very safe. Digital X-rays use very low doses of radiation, with dental imaging using the lowest dose of all plain-film radiography. A person would receive between 0.001-0.005mSv from a single dental exposure, emitting the same amount of radiation you would typically receive on a one- to two-hour flight, or comparable with one day of natural background radiation exposure. Radiation becomes harmful at very high doses (over 500mSV) and reactions occur very shortly after exposure. These high doses are only experienced as a result of large nuclear or radiation accidents, definitely not from plain film radiography. If you have any concerns regarding your dental imaging, your dentist or radiographer will be more than happy to discuss this with you prior to your imaging. Articles from Smile Solutions View Blogs Specialist Care Smile Solutions 18 Aug 2026 Endodontist vs Dentist for Root Canal: Why It Makes a Difference Read More General Smile Solutions 10 Aug 2026 Mouth Breathing: The Silent Habit That's Changing Your Face and Your Health Read More General Smile Solutions 3 Aug 2026 How Much Does a Dental Crown Cost in Melbourne? Materials Compared Read More Specialist Care Smile Solutions 18 Aug 2026 Endodontist vs Dentist for Root Canal: Why It Makes a Difference Read More General Smile Solutions 10 Aug 2026 Mouth Breathing: The Silent Habit That's Changing Your Face and Your Health Read More General Smile Solutions 3 Aug 2026 How Much Does a Dental Crown Cost in Melbourne? Materials Compared Read More View Blog Call Us 13 13 96 Location Level 1, 220 Collins Street Manchester Unity Building, Melbourne VIC 3000 Hours Of Service Monday – Friday: 8.00am – 6.00pm Saturday: 8.30am – 1.30pm Sunday: By Appointment Our Services General Dentistry Cosmetic Dentistry Orthodontics Specialist Care Dental Implants Children's Dentistry Emergency Dentistry Why Choose Us Our Team Media Awards Careers Technology Location Holistic Dentistry Quick Links Contact Us Articles Packages & Offers Dental Payment Plans Understanding Your Treatment Sitemap Privacy Policy Copyright © Smile Solutions. All Rights Reserved. This site is protected by reCAPTCHA and the Google Privacy Policy and Terms of Service apply. Close Our Services General Dentistry Dental Cleans and Hygienists Wisdom Teeth Emergency Dentistry Root Canal Tooth Fillings Chipped or Cracked Teeth Snoring & Sleep Apnoea TMD & Teeth Grinding Sport Mouthguards Dental Anxiety Cosmetic Dentistry Porcelain Veneers & Crowns Same Day Porcelain Veneers™ Composite Bonding Professional Teeth Whitening CEREC Restorations Invisalign® No Braces All-on-4® Dental Implants Gummy Smile Complimentary Cosmetic Consultation Orthodontics Invisalign No Braces Orthodontic Braces Children's Braces and Invisalign Jaw Surgery Dental Implants All-on-4® Dental Implants Conventional & Immediate Implants Dental Bridges Bone Grafting For Implants Dentures Specialist Care Oral & Maxillofacial Surgeons Prosthodontists Orthodontists Periodontists Endodontists Paediatric Dentists Complex Dentistry Children's Dentistry First Visit To The Dentist Children's Dental Emergencies Children's Braces and Invisalign Child Dental Benefit Schedule Kids Teeth Cleaning Tips Why Choose Us Our Team Our Location Technology Awards Holistic Dentistry Before After Gallery Payment Plans Packages & Offers Contact Us Call Us 13 13 96 Close Smile Solutions AI Assistant ■ Hello! I'm here to help you with questions about Smile Solutions. How can I assist you today? Popular questions: What services does Smile Solutions offer? How can I contact Smile Solutions What are your business hours? ■■ × 0 /1000 Contact Us Call Us 13 13 96 Location Level 1, 220 Collins Street Manchester Unity Building, Melbourne VIC 3000 Hours Of Service Monday – Friday: 8.00am – 6.00pm Saturday: 8.30am – 1.30pm Sunday: By Appointment Close Book Now