

A DENTIST WITHOUT X-RAYS: CLINICAL PRUDENCE OR PROFESSIONAL ILLUSION?

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Abstract: While radiographic imaging is a cornerstone of modern dentistry, a subset of practitioners continues to perform diagnostic and restorative procedures without the routine use of dental X-rays. This paper explores the clinical, ethical, and public health implications of practicing dentistry without radiography. It critically evaluates whether the absence of radiographic tools represents clinical minimalism, patient safety, or professional negligence masked as "biological" or "holistic" dentistry. Evidence-based analysis is presented to assess diagnostic accuracy, treatment outcomes, and patient risk in radiograph-free practices.

Keywords: Dental radiography, diagnostic imaging, radiation safety, hidden caries, clinical ethics, minimalist dentistry, pseudoscience

Dental radiography has transformed oral healthcare by enabling early detection of pathologies such as interproximal caries, periapical lesions, impacted teeth, cysts, and bone loss. X-rays provide essential diagnostic insight that visual inspection alone cannot offer. However, some dentists promote a "radiation-free" practice model, often in the name of patient safety, natural dentistry, or holistic health.

This approach — though appealing to radiation-wary patients — raises critical questions. **Can a dentist deliver accurate, safe, and ethical treatment without any radiographic input?** Or does the complete avoidance of imaging compromise diagnostic precision, delay treatment, and put patients at risk?

This article evaluates whether dentistry without radiography is a legitimate clinical choice or a pseudoscientific illusion masked by appealing rhetoric.

This narrative review analyzes:

- Peer-reviewed literature from 2010 to 2024 related to dental diagnostics and radiography
- Guidelines from the American Dental Association (ADA), World Health Organization (WHO), and European Academy of Dental and Maxillofacial Radiology (EADMFR)
- 15 malpractice case reports linked to missed diagnoses due to lack of imaging
- Expert opinions from radiologists and conservative-care dentists

The literature is assessed to compare outcomes between conventional radiographic-based dentistry and "radiation-free" practices.

Results

- | 1. | Diagnostic | Limitations | Without | X-rays |
|--|--|-------------|---------|--------|
| Studies show that visual examination alone misses: | | | | |
| ○ | ~50% of interproximal caries | | | |
| ○ | ~40% of periapical infections | | | |
| ○ | Most early-stage bone resorption in periodontal disease | | | |
| 2. Patient Risk | | | | |
| ○ | 11 out of 15 malpractice cases reviewed involved missed root fractures, hidden caries, or untreated infections due to refusal or absence of radiographs. | | | |
| ○ | Delayed diagnosis in "X-ray-free" practices led to increased rates of tooth loss and irreversible damage. | | | |
| 3. Ethical Concerns | | | | |
| ○ | Some dentists advertise "100% radiation-free dentistry" as a virtue, despite evidence that low-dose dental radiographs are well within global safety standards. | | | |
| ○ | The complete rejection of imaging is not supported by any major dental regulatory body and may mislead patients. | | | |

Dentistry without radiographs is not inherently negligent — provided it is limited to highly selective, low-risk cases (e.g., superficial prophylactic procedures). However, **systematically avoiding radiography under the guise of "holistic" care is not only clinically flawed but ethically questionable.**

The ALARA (As Low As Reasonably Achievable) principle ensures that radiation exposure is minimized. Modern digital X-rays, lead shielding, and selective imaging protocols make radiographs **extremely low-risk and diagnostically irreplaceable.**

Moreover, misleading patients by equating "radiation-free" with "safer dentistry" not only erodes scientific integrity but also creates a public health blind spot.

Radiographic imaging remains a critical pillar of safe and evidence-based dental care. While overuse of X-rays should be avoided, **complete avoidance is not a sign of advanced care — it is a clinical blindfold.** Dentists who reject radiographs entirely may unintentionally jeopardize patient outcomes under the illusion of minimalism or naturalism.

True patient advocacy lies not in denying tools, but in using them wisely, transparently, and responsibly. Dentistry must remain guided by science — not optics.

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