

SHIELDING DURING X-RAYS OF THE TEETH AND JAWS



Added shielding during diagnostic dental imaging should be discontinued as routine practice. However, federal, state and local regulations should be followed until they are updated.

WHY?

- Does not reduce internal scatter
- May obscure anatomy requiring retakes which increases radiation dose



AMERICAN ACADEMY OF
ORAL AND MAXILLOFACIAL RADIOLOGY

4248 Park Glen Road
Minneapolis, MN 55416
(952) 928-7477 | admin@aaomr.org
www.aaomr.org

Promoting Safety in Imaging Through
INFORMATION AND EDUCATION

© 2024 AAOMR

PREGNANT PATIENTS

Apron Shielding — NOT NEEDED —



AAOMR

AMERICAN ACADEMY OF
ORAL AND MAXILLOFACIAL RADIOLOGY

WHY ARE LEADED APRONS NO LONGER RECOMMENDED FOR PREGNANT PATIENTS?

- Leaded aprons provide no decrease in radiation absorbed by organs outside of the primary field, known as scattered radiation.
- Patient doses to the gonads and fetus due to scattered radiation from contemporary dental x-ray exams are negligible.
- Radiation does not cause heritable disease in humans.
- Fetal radiation dose is less than 10 microGy in all x-ray exams of the teeth and jaws, including CBCT.
- The exposed area is not near the fetus.
- There is no evidence to indicate that conventional dental imaging poses any risk to a fetus.



RECOMMENDATION

Leaded aprons are not recommended for x-rays of the teeth and jaws regardless of pregnancy status.

HOW AND AT WHAT DOSE DOES RADIATION AFFECT THE FETUS?

Effect	Threshold Dose		Sensitive Gestation Period	Risk from Oral and Maxillofacial Imaging
Prenatal death	100 mGy		< 10 days	None Fetal dose ~10,000-fold lower than threshold
Microcephaly	100 mGy		2-15 weeks	None Fetal dose ~10,000-fold lower than threshold
Growth retardation	100 mGy		2-15 weeks	None Fetal dose ~10,000-fold lower than threshold
Mental retardation	300 mGy		8-15 weeks	None Fetal dose ~30,000-fold lower than threshold
Radiation induced cancer	None		Throughout pregnancy	Negligible ~1 in 1.7 million

Possible fetal effects are seen only at doses that are **AT LEAST 10,000 TIMES HIGHER** than dental doses.

CAN THIS HAPPEN WITH THE DOSE I GET FROM DENTAL RADIOGRAPHS?

RECOMMENDATION

Thyroid shields are not recommended for x-rays of the teeth and jaws regardless of pregnancy status.