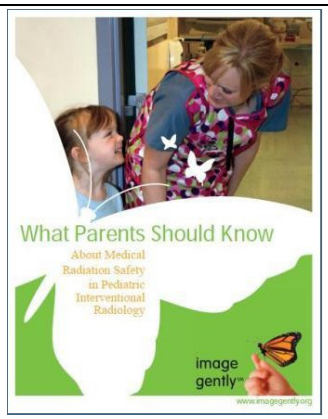
10 Perlas: Protección radiológica en intervenciones a niños

1. Recuerde: ciertos tejidos de los niños en crecimiento son más sensibles que los de los adultos

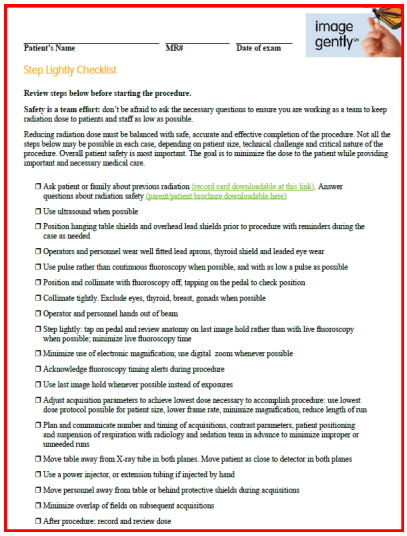
Los niños tienen una mayor esperanza de vida, por lo cual es más probable que se manifiesten los efectos de la radiación



2. Hable con los padres antes de la intervención:

Pregunte si ha habido exposiciones anteriores

Dé respuesta a sus inquietudes sobre seguridad radiológica



Patient's Name _____ MR# _____ Date of exam _____

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Step Lightly Checklist

Review steps below before starting the procedure.

Safety is a team effort: don't be afraid to ask the necessary questions to ensure you are working as a team to keep radiation dose to patients and staff as low as possible.

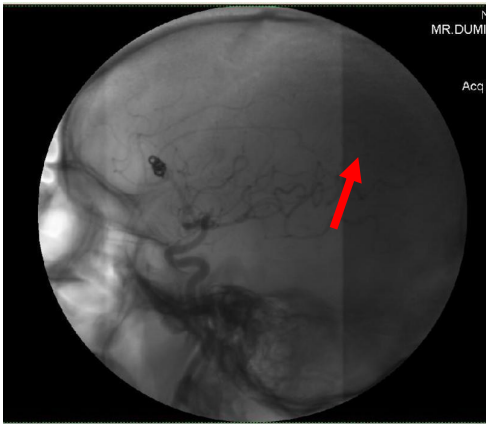
Reducing radiation dose must be balanced with safe, accurate and effective completion of the procedure. Not all the steps below may be possible in each case, depending on patient size, technical challenge and critical nature of the procedure. Overall patient safety is most important. The goal is to minimize the dose to the patient while providing important and necessary medical care.

- ❒ Ask patient or family about previous radiation (record card downloadable at this link). Answer questions about radiation safety (parent/patient brochure downloadable here)
- ❒ Use ultrasound when possible
- ❒ Position hanging table shields and overhead lead shields prior to procedure with reminders during the case as needed
- ❒ Operators and personnel wear well fitted lead aprons, thyroid shield and leaded eye wear
- ❒ Use pulse rather than continuous fluoroscopy when possible, and with as low a pulse as possible
- ❒ Position and collimate with fluoroscopy off, tapping on the pedal to check position
- ❒ Collimate tightly. Exclude eyes, thyroid, breast, gonads when possible
- ❒ Operator and personnel hands out of beam
- ❒ Step lightly: tap on pedal and review anatomy on last image hold rather than with live fluoroscopy when possible; minimize live fluoroscopy time
- ❒ Minimize use of electronic magnification; use digital zoom whenever possible
- ❒ Acknowledge fluoroscopy timing alerts during procedure
- ❒ Use last image hold whenever possible instead of exposures
- ❒ Adjust acquisition parameters to achieve lowest dose necessary to accomplish procedure: use lowest dose protocol possible for patient size, lower frame rate, minimize magnification, reduce length of run
- ❒ Plan and communicate number and timing of acquisitions, contrast parameters, patient positioning and suspension of respiration with radiology and sedation team in advance to minimize improper or unneeded runs
- ❒ Move table away from X-ray tube in both planes. Move patient as close to detector in both planes
- ❒ Use a power injector, or extension tubing if injected by hand
- ❒ Move personnel away from table or behind protective shields during acquisitions
- ❒ Minimize overlap of fields on subsequent acquisitions
- ❒ After procedure: record and review dose

3. Haga que los miembros de su equipo tomen más conciencia, mediante una lista de verificaciones previa a la intervención

http://www.pedrad.org/associations/5364/files/ImGen_StpLight_Chcklst.pdf

4. Planifique detalladamente las intervenciones con antelación para evitar series radiológicas inadecuadas o inacabadas y exposiciones repetidas



5. Proteja la tiroides, mamas, ojos y gónadas del paciente hasta donde sea posible

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https://rpop.iaea.org/RPOP/RPoP/Content/AdditionalResources/Posters/index.htm

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10 Perlas: Protección radiológica en intervenciones a niños

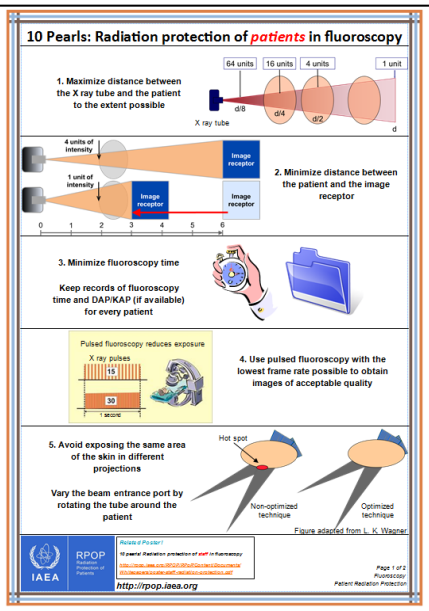
6. Utilice una técnica óptima:

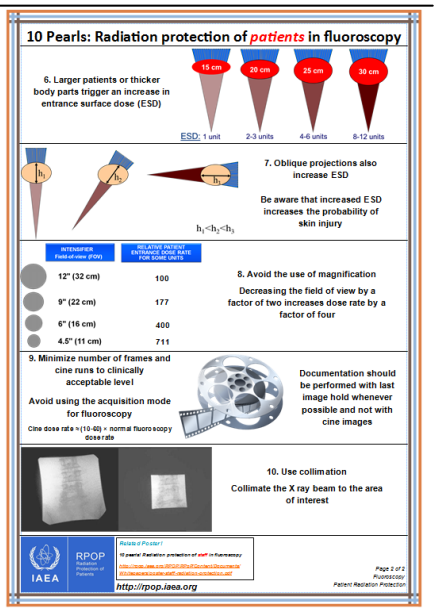
Reduzca la frecuencia de 7,5 a 3 pulsos por segundo cuando sea posible

Retire la rejilla antidifusora si el niño es de menos de 20 kg y si es posible. Utilice en su lugar la técnica de separación entre paciente y receptor de imagen ("air gap")

Reduzca al mínimo el tiempo de exposición

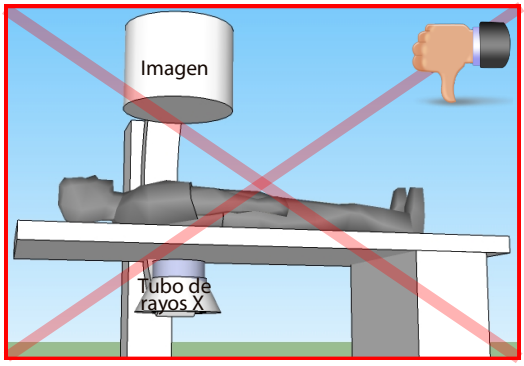
Reduzca al mínimo la superposición de haces en las tomas

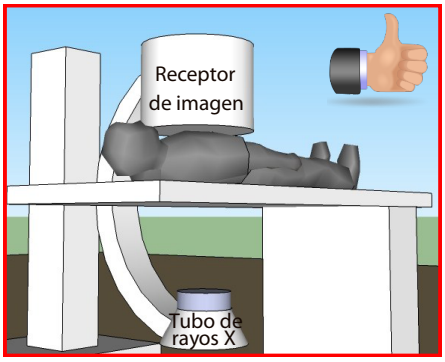




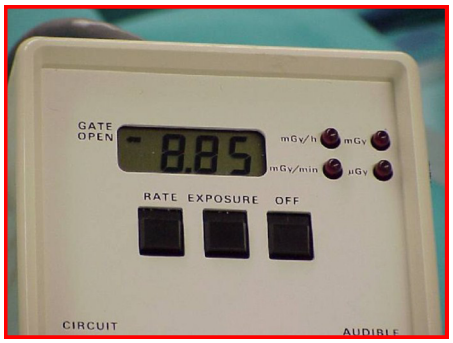
7. Utilice la "memoria de última imagen" siempre que sea adecuado, en lugar de realizar exposiciones adicionales

8. Aumente la distancia entre el paciente y el tubo de rayos X y disminuya la distancia entre el paciente y el receptor de imagen, excepto cuando utilice la técnica "air gap" sin rejilla

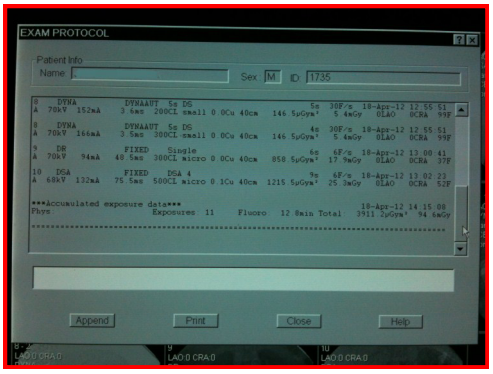




9. Utilice el registro de dosis y los medios tecnológicos del equipo para reducir la dosis



10. Tras la intervención revise y registre la dosis de radiación



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