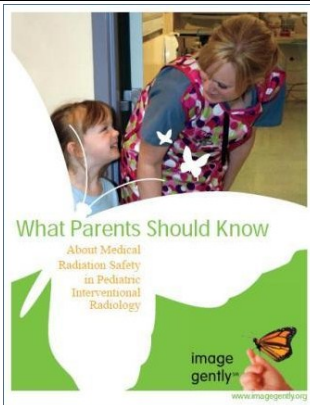


10 Tipps: Strahlenschutz für **Kinder** bei interventionellen Eingriffen

1. Beachte: Manche Gewebe von heranwachsenden Kindern sind strahlenempfindlicher als von Erwachsenen. Kinder haben noch eine längere Lebensspanne, in der Strahlungseffekte auftreten können



2. Sprich vor dem Eingriff mit den Eltern über

- bisherige Röntgenuntersuchungen des Kindes
- Ihre Sorgen bezüglich des Strahlenschutzes

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

Step Lightly Checklist

Review steps below before starting the procedure.

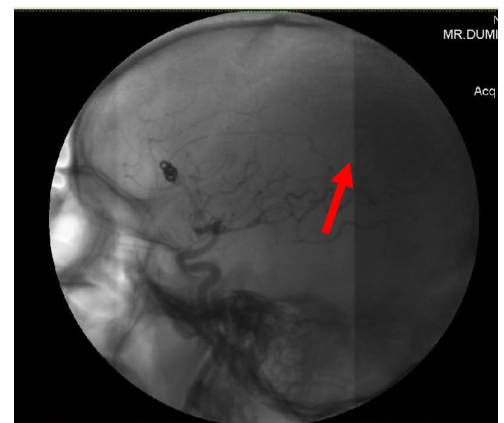
Safety is a team effort: don't be afraid to ask the necessary questions to ensure you are working as a team to keep radiation dose to patients and staff as low as possible.

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 unintended 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. Steigere die Aufmerksamkeit des Teams durch Verwendung einer Sicherheitscheckliste vor dem Eingriff

4. Plane die Untersuchung vor, um unsachgemäße oder abgebrochene Anläufe, bzw. wiederholte Durchleuchtungen zu vermeiden



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



5. Schütze die Schilddrüse, Brustdrüsen, Augen und Gonaden des Kindes durch Abdeckung oder Einblendung



RPOP Poster Homepage:

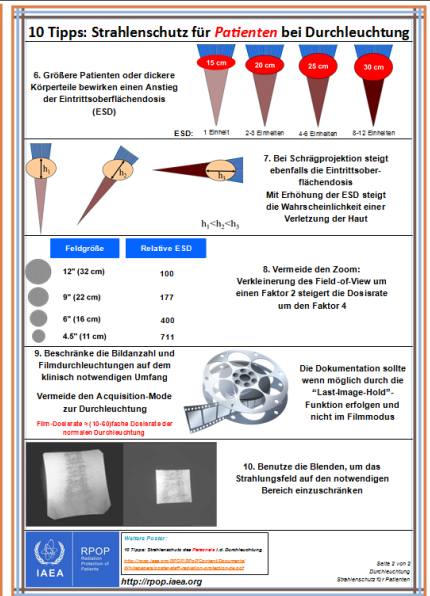
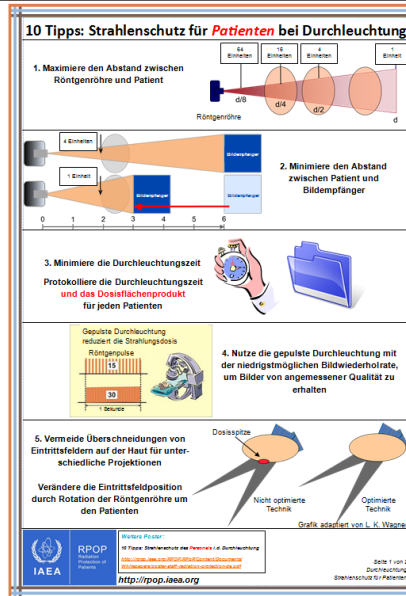
<https://rpop.iaea.org/RPOP/RPoP/Content/AdditionalResources/Posters/index.htm>

<http://rpop.iaea.org> <http://www.pedrad.org/associations/5364/ig/>

10 Tipps: Strahlenschutz für **Kinder** bei interventionellen Eingriffen

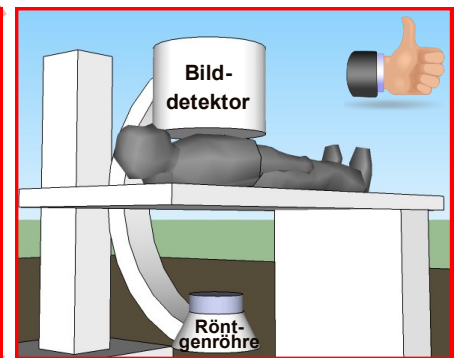
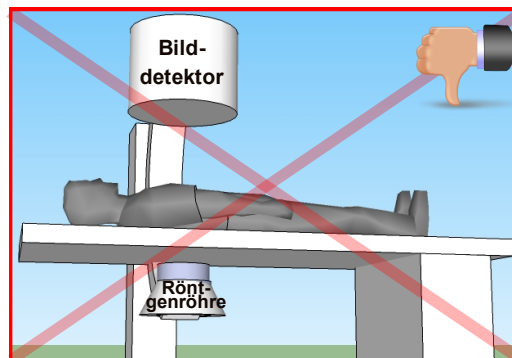
6. Nutze die optimale Technik:

- Niedrige Bildraten:
wenn möglich von 8 auf 3 Bilder pro Sekunde verringern
- Bei Kindern unter 20 kg:
Das Raster entfernen und einen größeren Abstand zum Detektor
- Durchleuchtungszeit minimieren
- Feldüberlappungen bei wiederholten Aufnahmen vermeiden
- Enge Einblendung verwenden
- Die Zoom-Funktion vermeiden

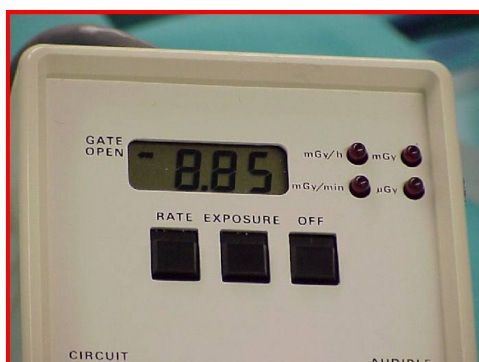


7. Nutze möglichst die "last image hold"-Funktion statt zusätzlicher Aufnahmen

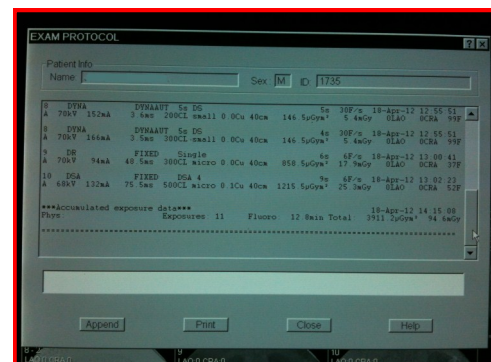
8. Vergrößere den Abstand des Patienten zur Röntgenröhre und Verkleinere den Abstand zum Bilddetektor



9. Nutze die Dosisaufzeichnung und Dosisreduktionstechniken des Geräts



10. Prüfe und protokolliere die Dosis nach dem Eingriff



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