

## Pause and Pulse 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

Reduction of 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 and type of procedure. The goal is to minimize the dose to the patient while providing important and necessary medical care while maximizing patient safety.

<input type="checkbox"/>	Ask patient or family about previous radiation ( <a href="#">record card downloadable at this link</a> ). Answer questions about radiation safety ( <a href="#">parent/patient brochure downloadable here</a> )
<input type="checkbox"/>	Use non-radiation modality, such as ultrasound, when possible.
<input type="checkbox"/>	Remove grids when performing examination on small patients.
<input type="checkbox"/>	Think about the position and aperture of the collimators before beginning the procedure, and during the procedure, as conditions and fields of view change.
<input type="checkbox"/>	Collimate tightly. Excludes eyes, thyroid, breast, gonads when possible.
<input type="checkbox"/>	Operators and personnel wear well fitted lead aprons, thyroid shield, and leaded eye wear.
<input type="checkbox"/>	Patient motion can be minimized by interaction with a child life specialist or with a parent, or by playing appropriate music. A DVD could be viewed in some procedures which involve waiting time, such as waiting for bladder to fill during VCUG.
<input type="checkbox"/>	Adjust acquisition parameters to achieve lowest dose necessary to accomplish procedure.
<input type="checkbox"/>	Keep II tower as close to patient as possible.
<input type="checkbox"/>	Use pulse rather than continuous fluoroscopy and with as low a pulse as possible.
<input type="checkbox"/>	Position and collimate with fluoroscopy off, with brief fluoroscopy to check position.
<input type="checkbox"/>	Hands of the operator and other personnel out of beam.
<input type="checkbox"/>	Pause when you Pulse. Tap on fluoroscopy button/pedal and review anatomy on last image hold rather than with live fluoroscopy; minimize live fluoroscopy time.
<input type="checkbox"/>	Minimize use of electronic magnification; use digital zoom whenever possible.
<input type="checkbox"/>	Acknowledge fluoroscopy timing alerts during procedure.
<input type="checkbox"/>	Use last image grab to record information whenever possible instead of exposures.
<input type="checkbox"/>	When patient position needs to be changed, plan ahead and communicate with personnel, to minimize need for additional fluoroscopy or repeat exposure.
<input type="checkbox"/>	After procedure: record and review fluoroscopic procedures used and fluoroscopy time.
<input type="checkbox"/>	Ensure that the equipment is checked regularly by physicist or designee with appropriate skills.