

Children's Emergency Department protocol for use of hand held metal detector in detecting ingested foreign bodies

See also: [Paediatric Clinical Practice Guideline - Ingestion of Foreign Bodies](#)

This guideline is for the use of Clinicians in the Children's Emergency Department (CED) at the Royal Alexandra Children's Hospital (RACH) who have been suitably trained in its use.

It should only be used in the case of ingestion of **non-hazardous metallic** objects, or on the direction of an appropriately trained Clinician.

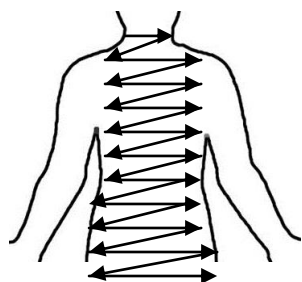
Background

Most metal objects can be detected by a metal detector, with the exception of batteries, for which metal detection may be unreliable. Metal detection is the only reliable method of detecting aluminium.

Metal detectors have no use in the detection of paper, wood or plastic objects.

Method

1. Ensure the absence of any metallic medical devices on / in patient e.g. clips / sternal sutures / pacemakers
2. Remove all clothing, metallic jewellery, glasses,
3. Child should be standing or held upright, away from metallic interferences (at least 1.5m).
4. Set sensitivity (Hold "on" button. Turn black dial clockwise until beeping starts, then rotate anti-clockwise until beeping disappears. Sensitivity now calibrated.)
5. Holding the white button, pass the metal detector over the child's body, first anterior aspect, then sides and posterior aspect



- a. Keep the metal detector as close to skin as possible.
- b. Start at level of neck and move downwards in a zig-zag fashion to level of rectum.
- c. Include lateral aspects of neck.

6. Beware of false readings e.g. when metal detector bangs skin. Ensure signal is consistent.
7. Record the level of the detected signal on body chart
 - a. If signal is **absent**, document as appropriate. No further action required.
 - b. If signal is **below the level of the diaphragm**, document as appropriate. No further action is required unless there are other clinical concerns.
 - c. If the signal is **above the level of the diaphragm**, proceed to confirm on chest x-ray (AP) +/- lateral CXR or lateral neck, as appropriate. If a lateral view is felt to be required, discuss with Paediatric Radiologist or CED Consultant.

CED pathway for reporting hand held metal detector findings

Clinician's Details

Name/stamp:

Date: Time:

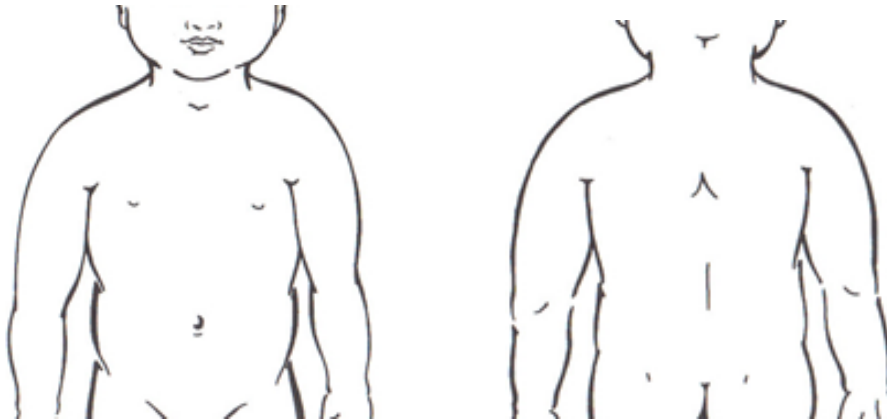
Patient details

Name:
.....

Date of birth:
.....

Trust ID & NHS number:

Record level of detected signal on body chart below:



1. Signal absent. No further action required
2. Signal detected below level of diaphragm, no further action required unless other clinical concerns
3. Signal detected above level of diaphragm. Requires CXR +/- lateral chest or neck x-ray (discuss with Paediatric Radiologist or CED Consultant if lateral required).

Tick ✓

Notes:

Clinician signature:.....