Plain Skull X-ray

**Synonym:** SXR

Headache and head trauma are common presenting problems in both primary care and the Accident and Emergency department. Plain skull X-ray films (plain skull films) have largely been superseded by CT scanning and/or MRI scans in the context of both headaches and head injuries.[^1] This is also true in paediatric patients.[^2] Skull X-rays are, however, still useful in children in whom non-accidental injury is suspected to detect previous injuries.[^1]

There is also now useful literature on the pre-hospital management of head injury.[^3][^4]

### Indications for plain skull X-ray

<table>
<thead>
<tr>
<th>Head injury or not</th>
<th>Clinical settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head injury</td>
<td>CT scanning is the recommended investigation and criteria for CT scanning are provided in the National Institute for Health and Care Excellence (NICE) guidance.[^1]</td>
</tr>
</tbody>
</table>
| Non-head injury cases | • Presence of a palpable vault abnormality which feels bony  
  • As part of an imaging protocol for specific clinical problems - eg, skeletal survey for myeloma. Many centres now prefer bone scans for this purpose.  
  • Facial views after trauma to the facial skeleton, mandible or orbit, or the possibility of a metallic foreign body. |

Skull films are **not** indicated routinely for the following indications:

- Headache.
- Possible pituitary problems - (CT/MRI preferred).
- Possible space-occupying lesion.
- Epilepsy.
- Dementia or memory loss.
- Middle or inner ear problems.
- Nasal trauma - coned views may be requested by the appropriate specialist.
- Sinus disease - mucosal thickening is a common incidental finding and not diagnostic.
- Temporomandibular joint dysfunction - will not show disc abnormality, which is the most common cause of dysfunction.

### Interpretation of skull films

Skull films should be interpreted wherever possible by a doctor with specialised training and/or considerable experience in interpreting such films. In untrained hands approximately 10% of bony abnormalities are not recognised. The absence of a fracture on a skull film does not rule out the possibility of an operable intracranial haematoma in head injured patients, which is why CT scanning is the investigation recommended in significant head injuries.[^1] All such findings must be taken in the context of the clinical condition of the patient.
Further reading & references

- Skull X-ray for mild head injury?; Bandolier

1. Head injury: Triage, assessment, investigation and early management of head injury in children, young people and adults; NICE Clinical guideline (Jan 2014)
3. Early Management of Patients with a Head Injury; Scottish Intercollegiate Guidelines Network - SIGN (May 2009)

Disclaimer: This article is for information only and should not be used for the diagnosis or treatment of medical conditions. EMIS has used all reasonable care in compiling the information but makes no warranty as to its accuracy. Consult a doctor or other healthcare professional for diagnosis and treatment of medical conditions. For details see our conditions.

Original Author: Dr Laurence Knott
Current Version: Dr Gurvinder Rull
Peer Reviewer: Dr Adrian Bonsall

Document ID: 2618 (v26)
Last Checked: 11/02/2014
Next Review: 10/02/2019

View this article online at: patient.info/doctor/plain-skull-x-ray
Discuss Plain Skull X-ray and find more trusted resources at Patient.