

X-ray Procedure Protocol

Initial Visit: Personal Injury, Worker's Compensation

Exacerbations: Patients who are not responding to treatment.

- **The generally accepted X-rays protocol which can determine the objective existence of spinal injuries and the Subluxation for both legal and treatment plans are the following;**
 1. **AP, Lateral Neutral, Flexion and Extension Cervical views.**
 2. **AP Thoracic view.**
 3. **AP, Lateral Neutral, Flexion and Extension Lumbar views.**

A General Rule of Thumb:

- **Once the clinician has established a history of trauma from an auto accident, injury or exacerbation of an existing injury, which can be quantified by an examination, X-rays may be determined to be "Reasonable and Necessary".**
- **The initial X-rays should be taken prior to any treatment, to establish the nature and extent of injuries and eliminate malpractice allegations.**
- **Specific Techniques or the extent of injuries and/or the area of complaint, may determine which regions of the spine will be X-rayed, to identify persistent Biomechanical improprieties.**
 1. **During the initial visit, at the Doctors discretion, a regional X-ray of the area of complaint or full series X-rays, may be taken.**
 2. **Periodic evaluations to determine improvement or lack of improvement may require serial films of the regions of the spine that presented objective evidence of spinal injury during the initial examination.**
 3. **Exacerbations require the same attention as do re-examinations and X-rays, to avoid malpractice. Exacerbation of an injury can complicate treatment and may change the entire biomechanical picture.**
 4. **Digitizing X-rays is an Objective Outcome Assessment Document that will retain the objective value of plain films. Computer Aided Mensuration Analysis may qualify and quantify the diagnosis of Motion Segment Integrity Translation and Angular, which is a ratable procedure to identify Permanent Impairment Whole Body (AMA Guides 5th Edition, Errata and 6th Edition) and document the necessity for continued treatment.**

- Depending upon the severity of the patients' injuries, corrective care may be necessary for an extended period of time. Therefore, it would be prudent for the treating Doctor to evaluate the patients' treatment plan and protocols for effectiveness, every six to eight weeks during the initial three months of treatment. Thereafter, an X-ray examination of the immediate area of injury, unless the prescribed treatment requires a global analysis of the full spine, may be performed every three months. Always X-ray the patient at time of treatment termination to establish a new base line. If the patient were ever to be reinjured you can establish the extent of a new injury from any previous claims. Consider Malpractice issues after dismissal. Always protect yourself!

Video Fluoroscopy and Dynamic Motion X-ray

Video Fluoroscopy and Dynamic Motion X-ray is one of the most valued tools to view motion spinal biomechanics. If you have access to a service or facility that performs this service, send your patients! When a Doctor avails him or her self with the advanced visual technology to functionally identify the extent of the patients' injuries, one can begin to understand where to treat. This printed document when viewed by a jury is quite compelling and often gains sympathetic consideration because the injuries have been objectively documented.

X-ray Technique

We will address each region of the spine for proper placement of the patient. This will greatly assist us in locating the important landmarks and enable us to provide you with an outstanding biomechanical measurement report of your patients' films.

Cervical AP films: Due to the jawbone, rarely do these films show C7 to the Atlas and Axis clearly, so it is recommended that an AP open mouth be taken.

Cervical Lateral films: Lateral films should clearly show C7 to skull. Often there are patients who are quite heavy and a cervical filter would be recommended. Set KVP and time for a lateral thoracic with the filter in place.

Cervical Motion films:
25% Impairment! Flexion films are taken as a two-part move. Ask patient to tuck their chin to their neck (this will lock up the facets) and then flex forward. If any ligament damage has occurred, this will allow the vertebra to displace to the posterior to a greater degree.

Extension films are taken by asking the patient to extend their head on to their shoulders.

- Thoracic AP films:** When performing this X-ray be sure that the upper cervicals are visible on the film so the examiner can identify where C7 and T1 are located to properly mark the films. The use of the cervical filter is prudent.
- Thoracic Lateral films:** Lateral Films are the most difficult to read due to shadows from the ribs. It is important to identify where C7 and T1 are located to properly mark the films. The use of the cervical filter is prudent.
- Lumbar AP films:** These films should have the bottom of the ischial tuberosity to L1 clearly seen. Most Doctors take films that clearly show the sacrum to L1. This is acceptable.
- Lumbar Lateral films:** These films should have the mid sacrum to L1 clearly seen.
- Lumbar Motion films:
20% Impairment!** These films should be taken with the patients' knees in the locked position to stabilize the pelvis. Ask the patient to bend forward for flexion and bend backwards for extension with their upper back and neck straight and ridged. This will force the lumbar spine to move rather than a collective movement of the entire spine.