

# X-rays

Many times a physical examination and detailed history of your health will yield enough information for your Doctor of Chiropractic to determine your problem, how your condition will respond to treatment, and a type of treatment will be most appropriate. Sometimes, however, additional information is necessary. When this happens, your doctor may recommend that you undergo testing called diagnostic imaging.

When you think of diagnostic imaging you probably think of x-rays, but diagnostic imaging procedures are diverse and span a wide spectrum ranging from traditional plain film radiographs (x-rays) to complex computer generated images, such as computed tomography (CT scans) and magnetic resonance imaging (MRI). Your doctor will select the type of diagnostic test that will give the most comprehensive information to help in treating your case.

## WHAT ARE X-RAY'S, CT SCAN'S, AND MRI'S?

**Plain film x-ray:** This commonly used diagnostic procedure produces a two-dimensional picture of the musculoskeletal system. During the procedure, the patient is positioned and remains motionless while carefully monitored, safe, low levels of radiation create an image on film of the musculoskeletal system and an overview of the soft tissue.

**CT scan:** During this procedure, this patient lies on a table, holding perfectly still inside a doughnut shaped machine. Multiple x-rays are taken at various angles. Special computers analyze the data and create detailed two-dimensional pictures, which actually provide three-dimensional evaluations of the spine.

**MRI:** Although this procedure is similar to CT scanning, the computer generated image that is created, the technique is quite different and involves a magnetic field rather than x-rays. The machine is like a well-lit tunnel in which the patient lies. The result is a remarkably detailed picture that is capable of revealing nerve involvement, as well as disc and other soft tissue alterations.

## WHY ARE X-RAY AND DIAGNOSTIC IMAGING USED?

X-ray and diagnostic imaging are frequently an integral part of the chiropractic work-up and the management of patient conditions. They give the Doctor of Chiropractic vital information to help evaluate and diagnose the patient and plan the most appropriate treatment.

These tests will help the doctor confirm a diagnosis, rule out serious pathology, detect birth or development defects such as scoliosis, reconfirm findings from the initial examination, assess your posture and biomechanics, and determine any conditions that might make manipulation inadvisable. Diagnostic imaging is used only when necessary and only with the informed consent of the patient.

## ARE X-RAYS SAFE?

There has been a great deal of publicity about the dangers of excessive exposure to x-rays. Properly used, x-rays are a safe and useful diagnostic tool for certain conditions. Based on your specific case and history, your doctor will decide what diagnostic imaging, if any, is necessary.

Your Doctor or Chiropractic will use his or her experience and training to ensure that you receive minimum radiation exposure necessary to confirm a diagnosis. Special film, shielding, and filters may also be used to minimize the amount of radiation that is received.

## WHAT TRAINING HAS MY DOCTOR OF CHIROPRACTIC RECEIVED TO TAKE X-RAYS?

Doctors of Chiropractic receive between 300 and 400 hours of radiology education while attending chiropractic college. These courses emphasize methods of taking good quality x-rays, with special attention to patient safety and protection. They are also trained to determine when and which x-rays should be taken and how to interpret the information provided on the radiographs.

In addition to the regular coursework, some doctors pursue a postgraduate specialty in radiology. The three-year residency includes exposure in hospitals, imaging centers, and/or professional school radiology programs, extensive additional education in radiology, and the successful completion of a comprehensive examination covering all aspects of radiology. Dr. Sperser has taken over 27,000 x-rays.

## PROFESSIONAL STANDARDS

The American Chiropractic Association has affirmed that there should always be clinical evidence of need for diagnostic x-ray examinations. X-rays should not be used as a routine screening procedure, but when used responsibly may be an integral part of determining your treatment program. Other professional chiropractic organizations have similar standards guiding the use of diagnostic imaging.

## REFERENCES

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