
Occupational Back & Neck Pain and the Interventional Radiologist



There is growing evidence to support the link between neck and back pain and working as an interventional radiologist. Thus, it's important for interventionalists to be aware of this occupational hazard and embrace actions that reduce the risk, according to a review published in *Journal of Vascular and Interventional Radiology*.

See Also: [Radiologists are the Stewards of Appropriate Imaging](#)

Currently, most interventional radiologists perform several procedures per day, some lasting hours, and also typically provide on-call coverage for hospitals 24 hours a day, 7 days a week. The physical demands are distinctly different from those of diagnostic radiology, as interventional radiology requires standing while wearing heavy personal protective garments, performing technically complex procedures, moving equipment, and changing positions to accomplish the task at hand.

"An interventionalist who has spent a career providing procedural care for patients and is affected by occupational musculoskeletal problems ought to be able to refer to a corresponding topic-specific societal document. As no such official Society of Interventional Radiology (SIR) document exists, it is hoped that this document will fill that void," write Robert G. Dixon, MD, of the Department of Radiology, University of North Carolina, Chapel Hill, NC and co-authors.

In one study, Moore et al. surveyed 688 radiologists (response rate, 34 percent) to investigate the possibility of a link between lead apron use and lower back pain (LBP). Although their data did not show a statistically significant association, back pain was reported by 52 percent of those who used lead aprons frequently. Other factors that are associated with back pain in interventionalists include repetitive motion patterns, insufficient recovery time, prolonged standing, axial loading of the spine, and awkward body postures.

Meanwhile, cervical pain is associated with the use of ceiling-mounted monitors and the repetitive head and neck movements required to view these monitors while performing invasive procedures (flexion, extension, lateral rotation, and lateral flexion).

The paper says several steps can be taken to prevent or mitigate back pain for the interventional radiologist. The most basic method of prevention is to identify and stop performing the activity responsible for the pain. Interventionalists may be able to rotate into assignments that do not require protective garments, such as outpatient settings or diagnostic radiology assignments. This may allow less required standing in the workplace and avoidance of pain-provoking activities.

Other treatment options are medications (e.g., nonsteroidal anti-inflammatory drugs, acetaminophen, muscle relaxants, and oral analgesic agents), therapeutic massage, stretching and other core exercises, and physical therapy. Alternative therapies such as yoga and acupuncture are known to be effective treatment for LBP.

The SIR Safety and Health Committee (part of the SIR Standards Division) is interested in recognizing and ultimately reducing the orthopaedic risks inherent to the interventional radiology community. In 2005, SIR joined with cardiology and other specialty groups to form the Multispecialty Occupational Health Group. This group authored a position statement in 2009 that was published in the radiology and cardiology literature calling for hospitals and industry to invest in equipment that reduces radiation exposure and enhance the ergonomic and functional design of interventional suites.

Procedure rooms should be designed to foster proper ergonomic positioning of the equipment with respect to the operator and patient. This will decrease the risk of posture-related and repetitive-stress injuries, the authors note. Monitors should be positioned within the physician's direct field of view to prevent unnatural positioning of the operator's head, neck, and shoulder during the case, the authors add.

Source: [Journal of Vascular and Interventional Radiology](#)

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