

# Beware: Orthopedic Surgery Is Hazardous to Our Health

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**W**hile we consistently discuss the risks of surgical treatment with our patients, we typically ignore, or at the very least, minimize, the risks we impose on ourselves by the very nature of our work. In this month's issue, Christopher S. Ahmad, MD, Editorial Board member of *The American Journal of Orthopedics*, and his colleagues from the Department of Orthopaedic Surgery at Columbia University Medical Center in New York, review the real hazards that orthopedic surgeons encounter on a daily basis ("Occupational Hazards Facing Orthopedic Surgeons," on page 132).



According to Ahmad and colleagues, orthopedic surgeons are exposed to a particularly hazardous work environment and we are advised to heed the risks to avoid potential harm. Orthopedic surgeons, personally risk denying by nature, are exposed to occupational hazards of which they are often unaware, they added. Hence, orthopedic surgeon, beware!

Just what are these risks? There are many: infection, radiation, smoke, toxic chemicals, noise, musculoskeletal injury, and emotional and psychological stress.

Orthopedic surgeons are particularly susceptible to blood-borne infectious agents given our exposure to sharp bloody objects (eg, fragments of bone, power saws, and drills) as well as the splattering of blood during the course of a routine orthopedic procedure—remember that the risk of blood-borne viral hepatitis is 10 to 100 times the risk of acquiring *HIV*. Universal precautions should be taken to reduce the risks: assume

every patient is a potential vector of infection and minimize exposure to any blood during the operative procedure.

I admit to being cavalier to the risk of radiation exposure over the years. How often have each of us declined the use of lead aprons during intraoperative x-rays? Not only is such behavior bad for our own health, but it sets a poor example for staff and orthopedic surgeons in training who expect us to follow the best practices. Remember, Dr. Marie Curie, winner of 2 Nobel prizes and the inventor of modern radiology, died of radiation induced pernicious anemia.

We have all been educated regarding the well documented medical risks of secondhand cigarette smoke inhalation, but recent reports indicate that inhalation of "surgical smoke" from bovies may be potentially harmful as well. Total joint surgeons are exposed to toxic fumes and contact with PMMA (polymethylmethacrylate), noisy power tools may contribute to hearing loss, prolonged standing and bending over the OR table can contribute to musculoskeletal injuries, and the very nature of our work dealing with patients in pain and the inherent risks associated with surgical treatment may cause emotional and psychological stress for the orthopedic surgeon. Who has not heard of orthopedic colleagues who suffer from mental burnout and depression?

Of course, orthopedic surgeons accept all of these hazards as simply the price of our normal course of work. However, Dr. Ahmad's article offers a wake up call that we should heed these risks that we encounter on a daily basis and minimize these hazards to our own health.

## AUTHOR'S DISCLOSURE STATEMENT

The author reports no actual or potential conflict of interest in relation to this article.

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