

# Deployed US military service members more likely to suffer noncombat bone and joint injuries

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Since September 11, 2001, an estimated 60,000 U.S. military service members have been injured in combat during the Afghanistan and Iraq wars. Nearly 45,000 (75 percent) of all combat injuries are caused by improvised explosive devices, also known as IEDs. Approximately two out of five service members with combat injuries (40 percent) have suffered fractures, traumatic amputations, and injuries to the spine.

Many of these injuries have some of the longest, highest rates of long-term disability and inpatient care resources by the Veterans Health Administration (VHA) hospitals and their civilian orthopaedic surgeon staff. Approximately 64 percent of those with combat-related bone and joint injuries also become permanently disabled.

However, according to retired Army Colonel Philip J. Belmont, MD, lead study author of a new literature review appearing in the June 2016 issue of the *Journal of the American Academy of Orthopaedic Surgeons* (JAAOS), deployed [military service members](#) who were engaged in sustained combat operations over a 15-month period were three times more likely to suffer non-combat musculoskeletal injuries than combat musculoskeletal injuries. In fact, even though 75 percent of musculoskeletal injuries are non-combat related, Dr. Belmont, an orthopaedic surgeon, says "80.5 percent of military air medical transports were for disease and non-[combat injuries](#)."

"Some common non-combat bone and joint injuries that [military service](#) members report when they return from their deployment include anterior cruciate ligament (ACL) injuries of the knee and shoulder dislocations. Those injuries occur nearly five times more often among military service members than they do in the civilian population. Also common are ankle sprains and plantar fasciitis," says Dr. Belmont, the latter a condition causing prolonged pain and discomfort along the bottom of the foot and heel.

Previous researchers found that among service members who completed their deployments:

- 19 percent required an orthopaedic consultation;
- Four percent underwent orthopaedic surgery; and,
- 50 percent of those surgical procedures were on the knee or shoulder upon return to station.

Daily, physical hardships endured during deployment can be taxing on military service members, but remaining in peak physical condition and staying alert to their environment can help minimize their likelihood of non-combat injuries.

While military tactical gear technology, like body armor and Kevlar helmets, continues to improve and reduce the overall number of life-threatening wounds, "soldiers who in previous conflicts would have succumbed to injuries on the battlefield are now surviving, yet they still have devastating orthopaedic injuries that require extensive treatment," says Dr. Belmont.

**More information:** Philip J. Belmont et al, Musculoskeletal Injuries in Iraq and Afghanistan, *Journal of the American Academy of Orthopaedic Surgeons* (2016). [DOI: 10.5435/JAAOS-D-15-00123](https://doi.org/10.5435/JAAOS-D-15-00123)

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