

Suspected Radio Frequency Electromagnetic Fields (RF-EMF) Overexposure

Overexposure Effects

- Bulk tissue heating with > 5MHz frequencies
- Painful sparks with < 5MHz frequencies

Penetration Depth

- Superficial (frequencies >3GHz) → burns/eye damage
- Deep (frequencies <3GHz) → heat exhaustion, heat stroke, localized tissue damage due to hyperthermia

RF-EMF health effects are NOT cumulative

Reporting Requirements

- Incident facility/vessel
- Individual involved
- Describe incident
- List likely causes
- Distance from emitting source
- Exposure duration
- Which body part vs whole body affected
- Severity of incident: critical, major, minor
- Medical action taken

RF-EMF Emitting Sources

- Communications
- Navigation
- Radar
- Directed energy weapons
- EM countermeasures

Common symptoms

- Warm sensation
- Pain
- Sweating
- Skin burns

Suspected RF Injury

- First treat life-threatening conditions
- Teleconsultation with 711 HPW/PATH/HELP

Treatment & Disposition

Burns

- Majority of RF-EMF burns heal on their own with no intervention
- 2nd and 3rd degree burns with TBSA >20% - Acute fluid resuscitation per protocol
- Wound care per Burn CPG

Hyperthermia

- Monitor/treat for heat exhaustion
- Monitor/treat heat stroke

Ocular Injuries

- Standard of care for keratitis, hemorrhage, optic nerve injury

Neuropsychological symptoms

- No established causal relationship between RF EMF and TBI
- Rule out TBI from other causes

Persisting symptoms /neurological complaints need urgent evacuation

Incident Reporting

1. Chain of Command
2. DoD EMF Hotline: ESOH Service Center (800) 473-3764; Comm (937) 938-3764 DSN 798-3764; esoh.service.center@wpafb.af.mil



Document comprehensive medical evaluation ASAP after exposure:

- type of RF-EMF injury
- severity
- treatment
- outcomes



This information is pulled from the evidence-based Joint Trauma System (JTS) Suspected Radiofrequency Electromagnetic Fields Overexposure Clinical Practice Guideline (CPG). JTS CPGs can be found at the [JTS CPG website](#) or the [JTS Deployed Medicine site](#).