OSHA OUTREACH COURSES

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RADIOFREQUENCY (RF) TRAINING

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Radiofrequency (RF) Training

What Is RF Energy?

RF energy:

- Is an invisible wave that moves away from an emitter (radiates) and is absorbed or received by surrounding objects
- Transfers energy to the atoms in molecules, generating heat
- Poses serious health and safety hazards when exposure is not controlled sufficiently

Where Is RF Energy?

We use RF energy for:

- Telecommunications
- Microwaves
- Industrial drying, heating and sealing
- Medical applications
- Radar

Hazards

RF energy produces **heat** that can lead to shocks, burns and fires. Uncontrolled RF exposure can cause **health issues** including cataracts and temporary sterility.

Safety Precautions

- Use hard-wired alternatives to wireless RF devices or equipment
- Assume all devices, equipment or antennas are active
- Notify owners before working on equipment or antennas
- Ensure only authorized/escorted people are in the area
- Obey posted signs
- Limit the duration and frequency of use
- Stay as far away as possible (maintain at last 1 meter/3 feet of clearance)
- Do not stop in front of antennas
- Do not operate antennas in equipment rooms (contact with electrical conductors may cause shock or electrocution)
- Use shields
- Wear personal protective equipment (PPE)
- Use RF monitors

Emergencies

When RF energy overheats the body, the person exposed may notice:

- Labored breathing
- Perspiring
- Pain
- Headache
- Tingling, numbness, skin-crawling sensation or itching
- Feeling unwell, in general
- Diarrhea
- Skin inflammation

Burns can be worse than they appear and go deeper than you can see.

If you suspect someone has been overexposed to RF energy:

1. Move the person from the exposure area to a cool environment.
2. Provide cool drinking water and apply cold water or ice to burns.
3. Seek immediate medical attention.