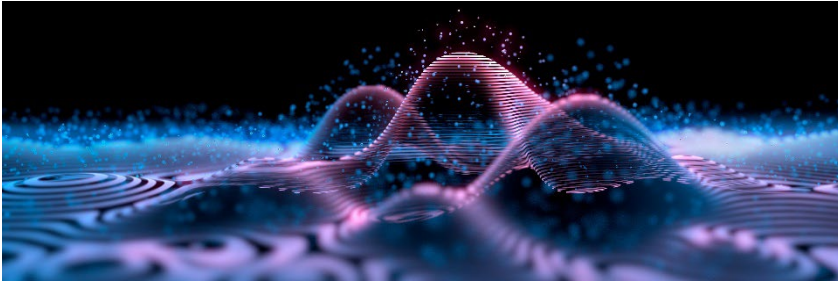


# THE FACTS On Radiofrequency



## OCCUPATIONAL AND ENVIRONMENTAL SAFETY

### Electromagnetic Fields



**Radiofrequency (RF) Electromagnetic Fields (EMF)** are oscillating electric and magnetic fields, the number of oscillations per second or frequency is described in units of hertz (Hz). When the electromagnetic field impacts upon material, including biological tissue, it interacts with the atoms and molecules in that material.

The human body absorbs energy from devices that emit radiofrequency electromagnetic radiation. The dose of the absorbed energy is estimated using a measure called the specific absorption rate (SAR), which is expressed in watts per kilogram of body weight.

#### Most Common Sources of RF EMF

- Cell phones
- Radars
- Satellite stations
- Radio and TV signals
- Smart electric and gas meters
- Portable wireless tablets
- Laptop computer

#### RF EMF - Adverse Effect

RF EMF interact with the human body through heat. Many EMF regulations and guidelines are based on limiting thermal effect to 1 °C of body temperature rise.



#### Reducing cellphone exposure:

- Limiting your phone use time
- Texting instead of talking (not while you are driving, of course!)
- Using speakerphone, hands-free device or earpiece increases distance from the phone to the head and other parts of the body
- Choosing phone with lower SAR (but this may impair its ability to connect to the network)

For more information Call Occupational and Environmental Safety, **656-0341**.

Occupational and Environmental Safety (OES) is a team of dedicated professionals who provide safety and compliance services to support Clemson University's core mission of research, teaching and public service. We accomplish this through collaboration and partnerships with the Clemson community and are committed to continuous improvement and exceptional customer service.

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