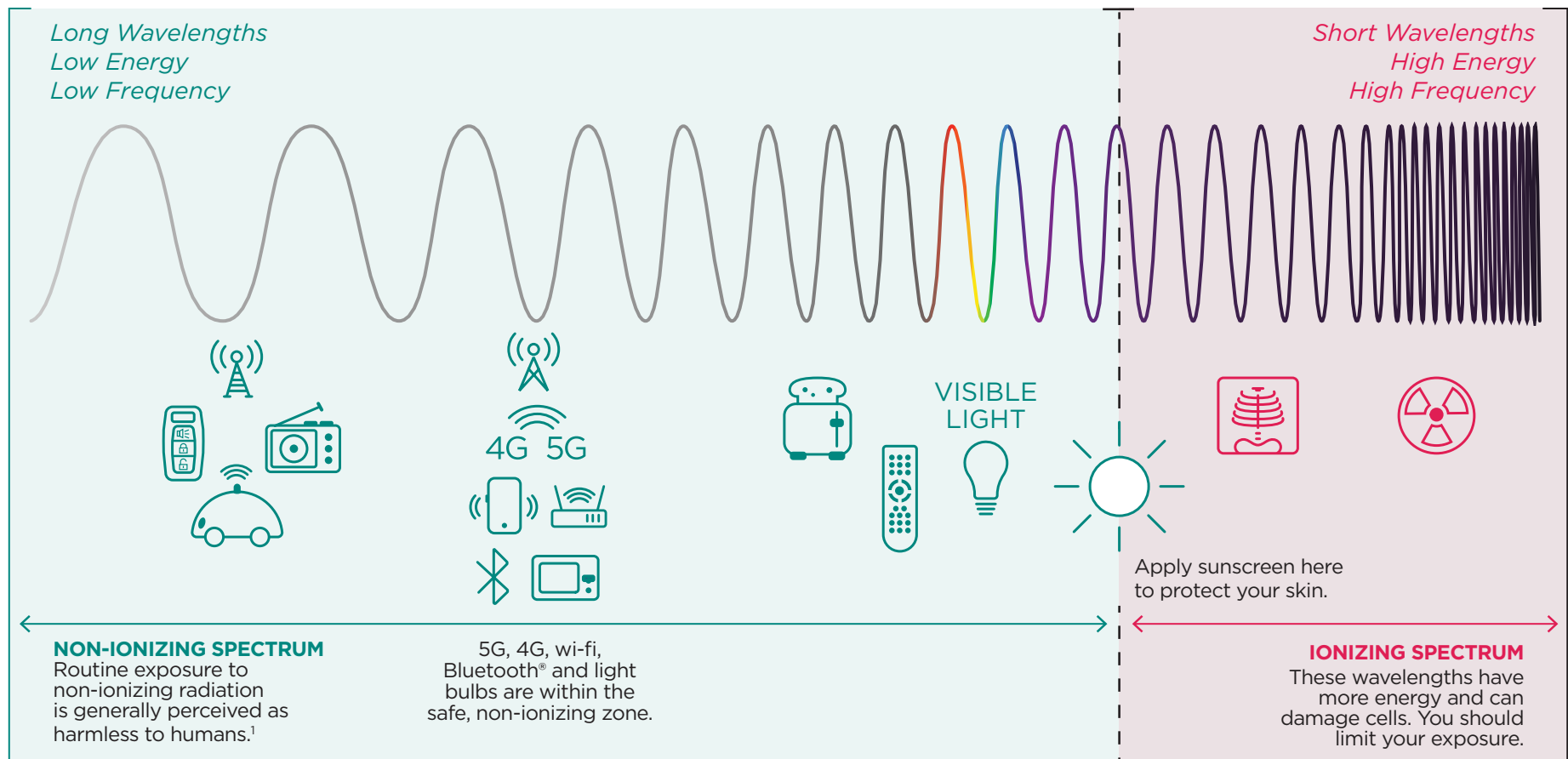


# Wireless Communication Safety

You've probably heard about 5G (5th generation) cellular phone networks, which are in widespread use around the world. Much like the signals from wi-fi, Bluetooth, radios, 4G and earlier generations of cell phone service, 5G signals travel to your cell phone and other devices using electromagnetic energy—one of the most ubiquitous and well-studied phenomena in the universe.

## Non-ionizing: Where cell phones and towers fit on the electromagnetic spectrum

Cell towers and cell phone service falls within the non-ionizing portion of the electromagnetic spectrum. Routine exposure to non-ionizing radiation is generally perceived as harmless to humans.<sup>1</sup>



## Growing demand

People desire better, more reliable service for the wireless devices that improve daily life and enable businesses. Wireless networks are advancing to keep up.

5G (5th generation) is the latest wireless technology—with higher speeds and much more capacity. 4G and 5G antennas are placed on tall cell towers and small wireless facilities, or “small cells”, connected by high-speed fiber optic cable. Hundreds of thousands of small cells are already deployed<sup>2</sup> across the US in neighborhoods, stadiums and theme parks.



Sample small cell in Miami-Dade County, Florida.

## Non-ionizing, low power

**We're surrounded by safe electromagnetic emissions**—sometimes called radio frequency (RF) emissions—from wi-fi, Bluetooth®, radios, lights, cell phones and other sources.



They are safe because they are **non-ionizing** and they are **low-power**. Power levels for wireless communications are tightly regulated by the Federal Communications Commission (FCC).

## Safety in your community

Network upgrades also provide more reliable access to police, fire and emergency medical services. In many areas, **80% of 911 calls are placed from a wireless device.**<sup>3</sup>

## Learn more

**Pew Research Center: 97% of Americans now own a cell phone**<sup>4</sup>. [Read more.](#)

**The 5G Health Hazard that Isn't.** *The New York Times* shows how misinformation about wireless tech has spread. [Read more.](#)

**Do cellphones cause brain cancer?**  
**A WHO review of 63 studies finds no link**<sup>5</sup>.  
*The Washington Post* [Read more.](#)

Cell phone networks safely connect you to your loved ones, your job, your school and emergency services.

## Key takeaways

- 1 Safety.** Worldwide scientific consensus is that cellular signals are safe.
- 2 Security.** Network upgrades enable reliable 911 calls, most of which are made from cell phones.
- 3 Similarity.** These wireless signals are similar to other everyday technologies like wi-fi and AM/FM radio.

“Scientific consensus shows that non-ionizing radiation is not a carcinogen and, at or below the radio frequency exposure limits set by the FCC, non-ionizing radiation has not been shown to cause any harm to people.”<sup>1</sup>

U.S. Food and Drug Administration

1) FDA: <https://www.fda.gov/radiation-emitting-products/cell-phones/radio-frequency-radiation-and-cell-phones>

2) WIA: <https://wia.org/wireless-infrastructure-association-report-reveals-industrys-critical-role-in-fueling-economic-growth/>

3) NENA: <https://www.nena.org/page/911statistics>

4) Pew Research Center: <https://www.pewresearch.org/internet/fact-sheet/mobile/>

5) The Washington Post: <https://www.washingtonpost.com/wellness/2024/09/03/cellphones-cancer-risk-radiation/>