

# Media Bundle

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# Our role in your world.

We own and operate the nation's most unique and comprehensive portfolio of communications infrastructure. It all works together to meet unprecedented demand—connecting people, businesses, and communities and erasing life's conventional boundaries.

## Our infrastructure transforms everything around us.

### People

We connect people to the devices, apps, and data they rely on to communicate, stay informed, and live their lives to the fullest.

### Businesses and organizations

We make sure businesses and other large organizations have secure access to the essential data and applications they need to embrace new technologies and stay ahead.

### Communities

We provide connections that improve safety and efficiency and that make communities better places to live.

### Schools and universities

Our fast, secure fiber networks support new learning technologies in the classroom and promote groundbreaking research in higher education.

### First responders

We give police officers, firefighters, and EMTs secure access to the information they need to react quickly to emergencies.

### Venues

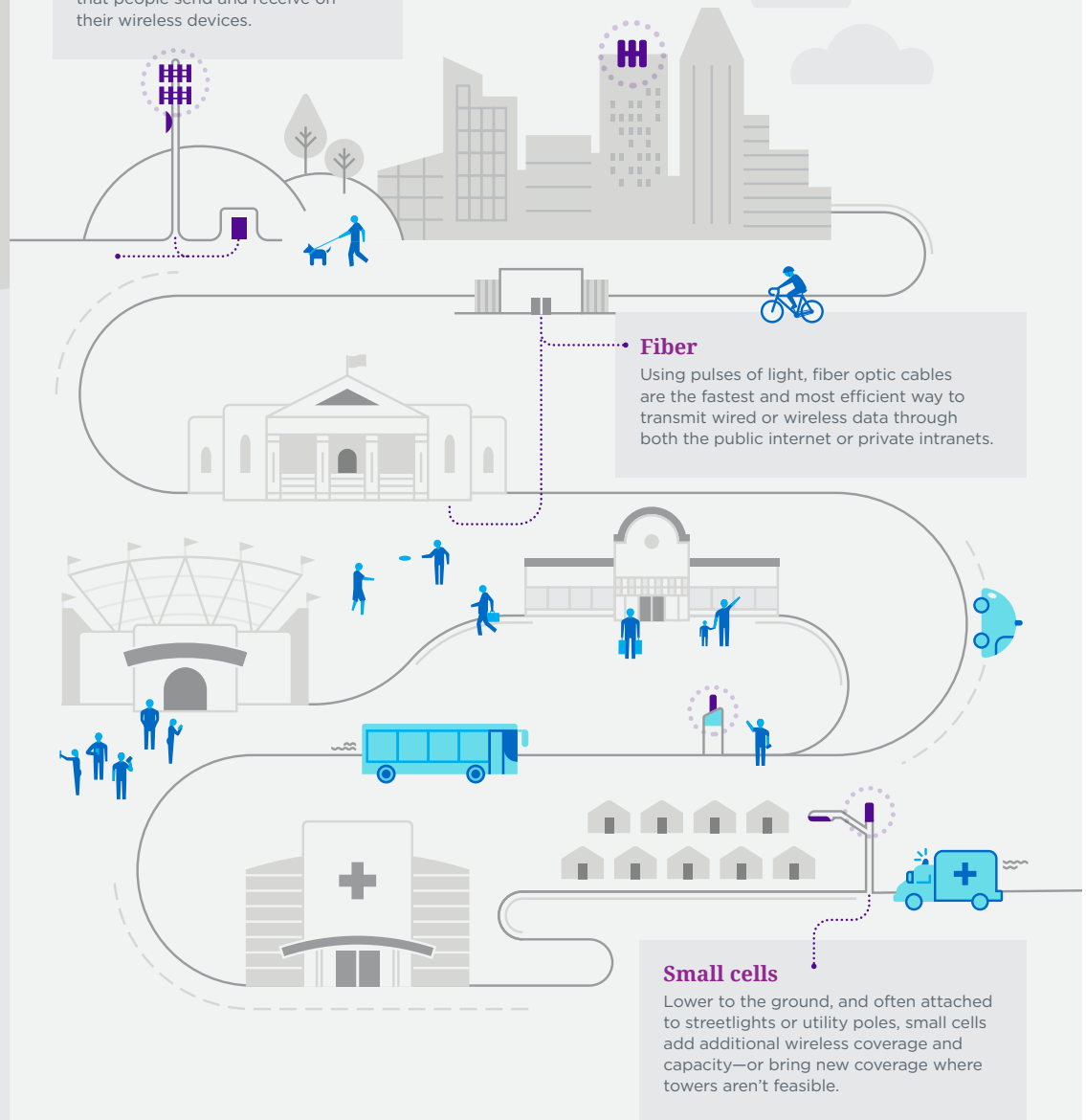
We give stadiums, convention centers, amusement parks, and other venues the wireless coverage and capacity to accommodate large crowds.

### Innovators

We help deploy exciting new technologies that build smarter communities and create new opportunities for cities and technology companies alike.

### Cell towers

Towers receive and transmit cellular signals over a large geographic area—carrying the voice and data that people send and receive on their wireless devices.



### Fiber

Using pulses of light, fiber optic cables are the fastest and most efficient way to transmit wired or wireless data through both the public internet or private intranets.

### Small cells

Lower to the ground, and often attached to streetlights or utility poles, small cells add additional wireless coverage and capacity—or bring new coverage where towers aren't feasible.

# 5G: The next generation of wireless connectivity.

5G represents nothing short of a wireless revolution. It will usher in new technologies, new mobile experiences, and has the potential to fundamentally change the way we interact with each other—and the world. With the right infrastructure and technology in place, 5G will connect 100X more devices at up to 100X faster speeds<sup>1</sup>—opening new possibilities for wearables, machine-to-machine communications, and internet of things technologies.

## 5G will make our communities smarter, safer, and more efficient.

### A safer, healthier community.

Faster, improved communications will bring new efficiencies to diagnosing and treating illnesses and will make responding to emergencies more effective.

### More efficient, faster-moving cities.

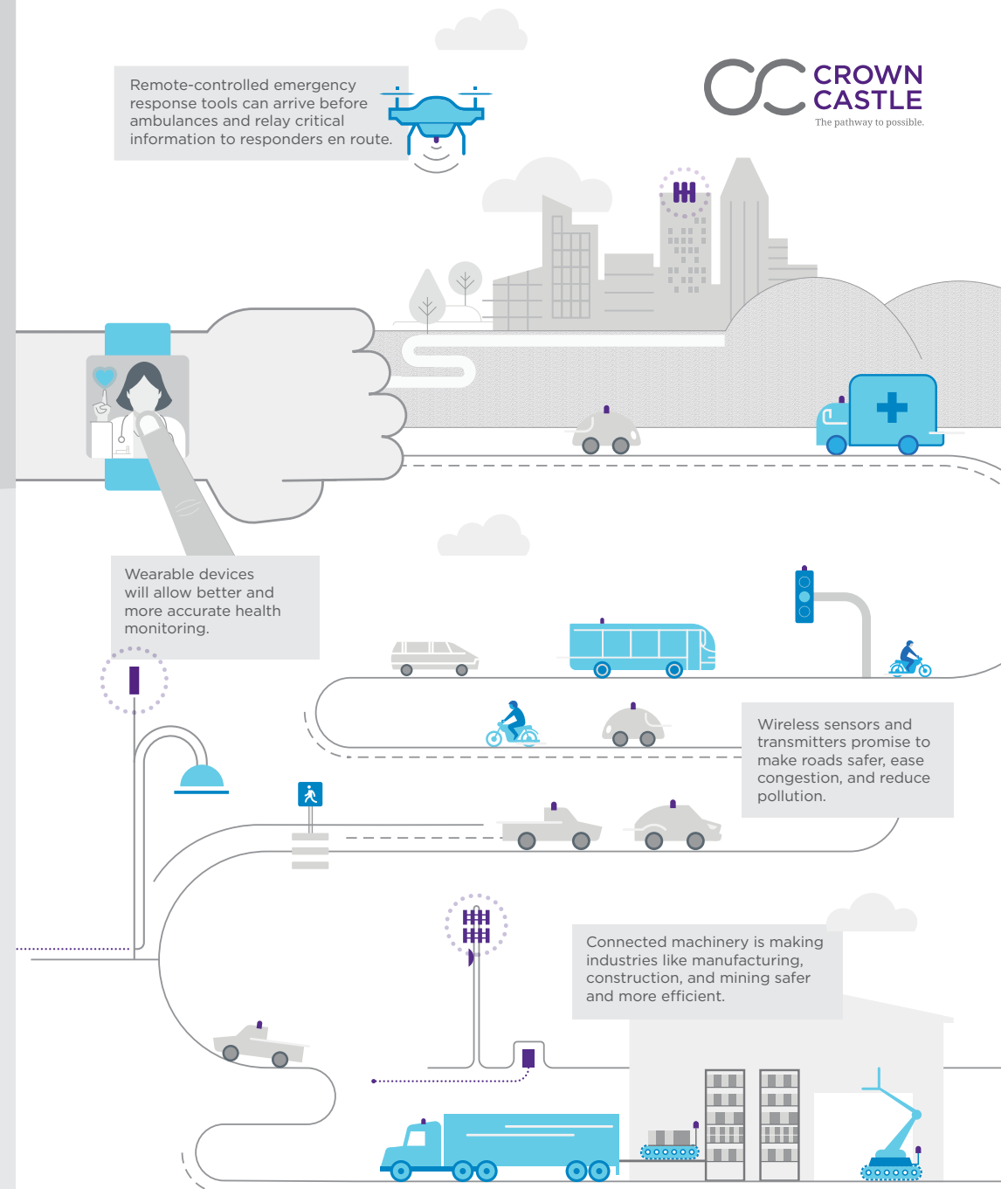
5G will support smart city technologies that allow traffic to move smoothly and efficiently, while responding to changing conditions.

### New opportunities in business and commerce.

Advanced augmented reality and virtual reality technologies will support new and existing industries while changing the way we interact with the world.

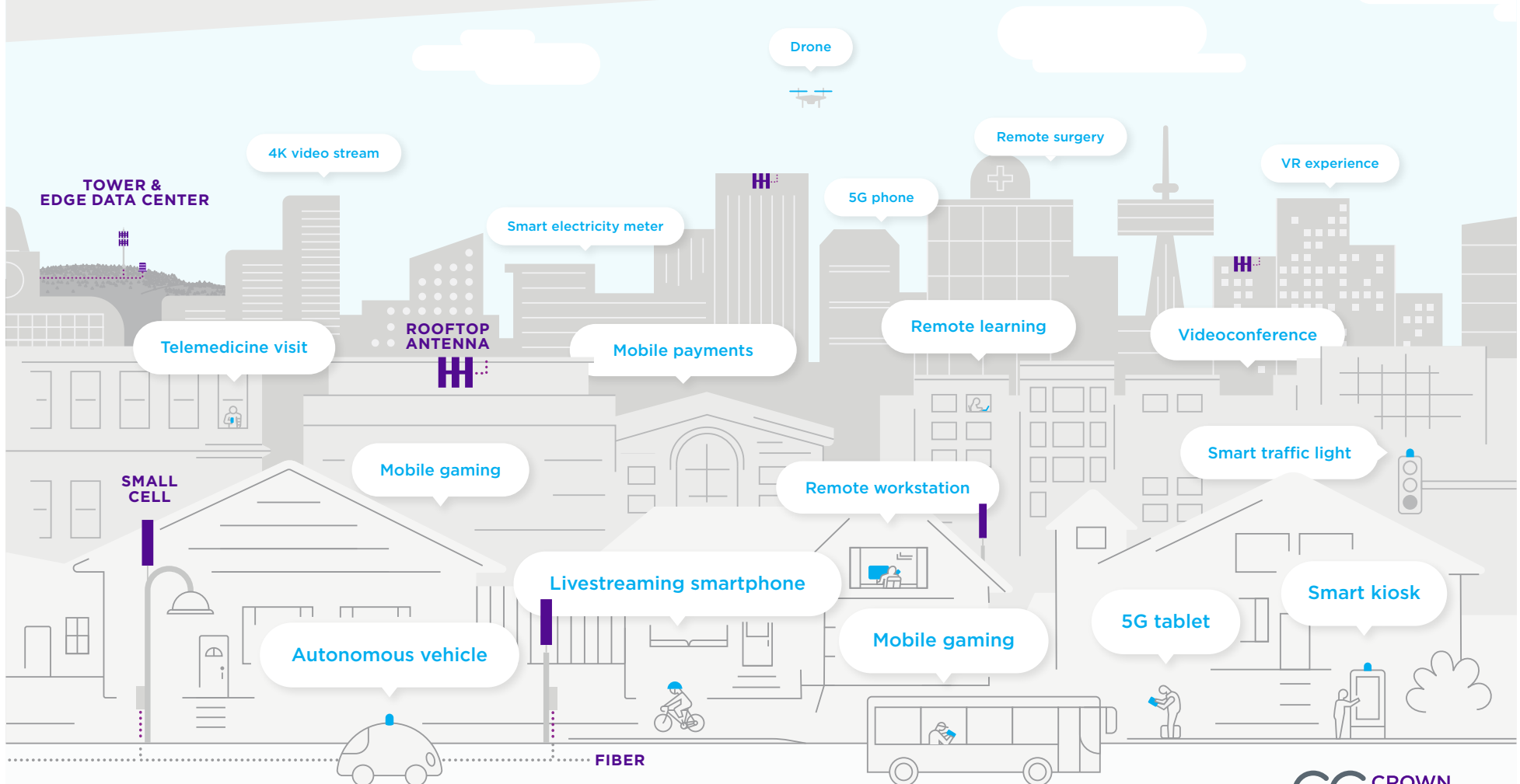
To learn more about what 5G will bring, visit [CrownCastle.com/5G](https://www.crowncastle.com/5G)

1. What is 5G: A Brief Explainer, CTIA, 2018.



# Strengthening today's networks for the future.

Today's networks were built to accommodate the widespread adoption of smartphones. Now, with the internet of things, 5G, and recent shifts in the way people work and learn, many networks are facing new strains on data capacity. With everything from traffic lights and autonomous cars to the watch on your wrist coming online, additional small cells, high-capacity fiber and other infrastructure will be needed to pave the way for exciting innovations like these.

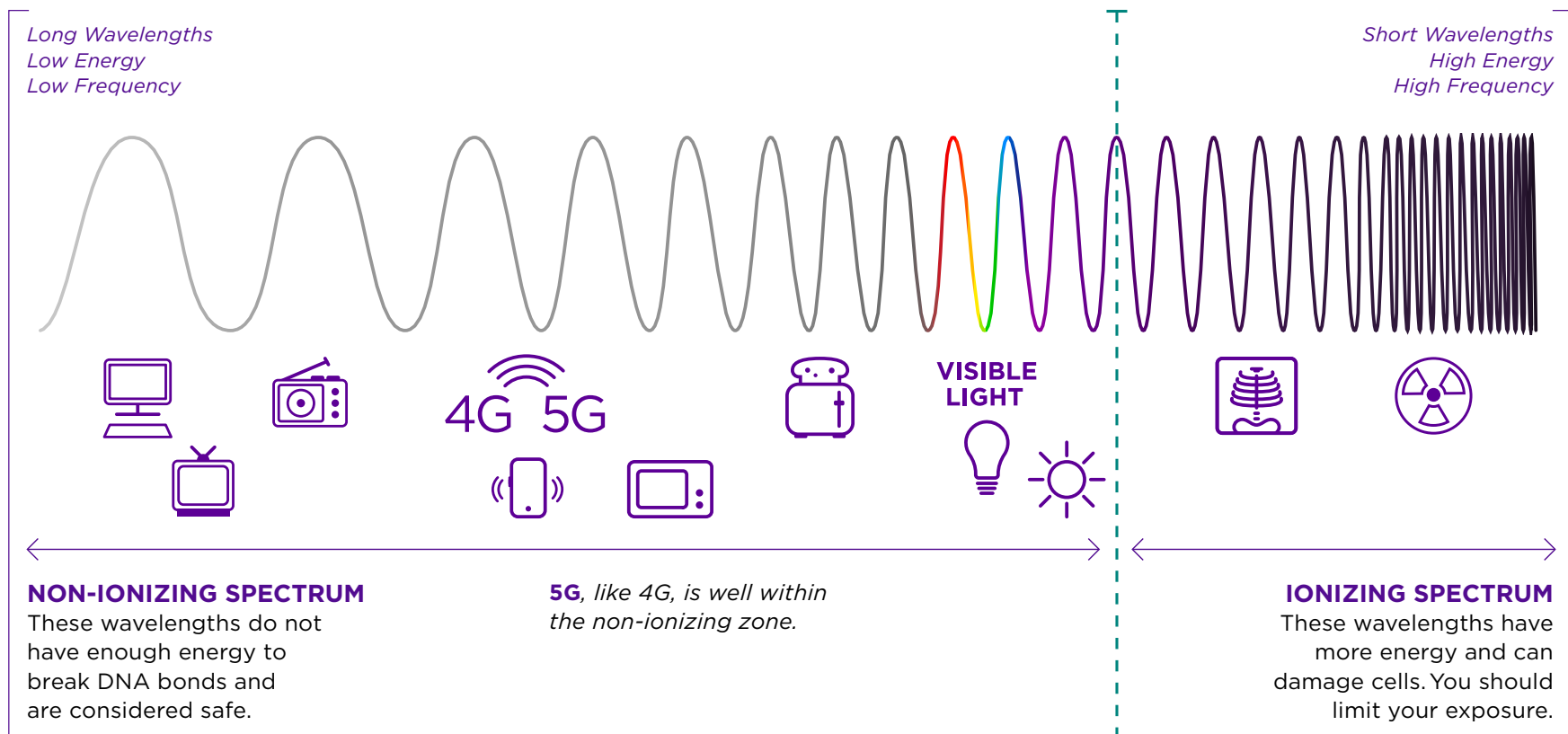


# Understanding the safety of 5G.



You've probably heard a lot about new 5G networks, and it's only natural to wonder about their safety. Much like the signals for your TV, radio or wi-fi router, 5G travels to your device using electromagnetic energy—one of the most ubiquitous and well-studied phenomena in the universe.

## Where 5G fits on the electromagnetic spectrum.



## 5G builds on 4G.

5G is the next generation of wireless technology, but it works pretty much the same as current 4G networks. To expand 5G throughout the country, carriers are working hard to expand small cells and fiber. The good news is that over **154,000 small cells are already deployed**<sup>1</sup> throughout the US—powering many of the 4G and LTE networks in use today.

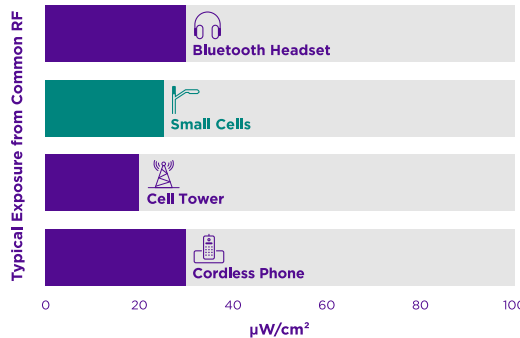


**Small cells** are low-powered, fiber-connected nodes that are usually located on existing structures like streetlights and utility poles.

[Read More →](#)

## Low power minimizes exposure.

We're constantly surrounded by electromagnetic energy. Whether you're talking about 5G, 4G or your Bluetooth headset, the physics are the same, and the body's response is essentially identical. You can see in this chart how emission levels from small cells compare to other common radio frequencies (RF)—all many times below what the FCC considers safe.



Source: © 2018 Andrew H. Thatcher, Board Certified Health Physicist.

**We encourage you to take a deeper dive if you'd like to know more.**

### The 5G Health Hazard That Isn't.

The *New York Times* shows how misinformation about wireless technologies has spread. [Read More →](#)

### 5G and Your Health.

A scientist who sets global guidelines for 5G explains how we know it's safe. [Read More →](#)

## Key takeaways.

- 1 Studies show that cellular signals—including 5G—are safe.
- 2 5G is the next generation of cellular networks and builds on 4G.
- 3 5G emissions are similar to those from everyday technologies like TV, radio, wi-fi—even your toaster.

“The light produced by a light bulb is a form of electromagnetic radiation with energy and frequency that is approximately 17,000 greater than that of the highest frequencies used by 5G.”

Dr. Jerrold Bushberg,  
Vice Chair of COMAR and Clinical Professor,  
Radiology & Radiation Oncology, University  
of California, Davis School of Medicine

<sup>1</sup><https://www.ctia.org/infrastructure-channel>

## Additional wireless infrastructure safety resources

**CTIA: Wireless Health Facts**

**NYT: The 5G Health Hazard that Isn't**

## Additional Crown Castle resources

### **Small Cells 101**

Get a high-level overview of the infrastructure that's adding much needed capacity to wireless networks.

### **Visit Anytown**

Take a virtual tour of "Anytown" to see all the infrastructure that keeps people, businesses and communities connected.

### **5G 101**

Learn how 5G is ushering in new technologies, enabling advanced mobile experiences and changing the way we interact.

### **Connected by Good**

How we're giving back to the communities we serve.