Answering Questions About 5G

Verizon may install wireless equipment to upgrade to 5G service in your area. Some people are curious about 5G. Others have a few questions. We want to keep you informed about what's going on.

Let's be clear about one thing up-front:
Verizon's equipment complies with all federal safety standards, so it is safe.

What is "5G," anyway?
We call this service 5G because it is the fifth generation of wireless communication technology. The first generation (1G) gave us cell phones with voice capability. The second generation (2G) gave us text and messaging. The third generation (3G) gave us smartphones and wireless access to the internet. And the fourth generation (4G) gave us video streaming and many other connected services and devices that we rely on and enjoy today. Verizon is upgrading to 5G to improve existing communications and to support innovative applications. 5G will enable self-driving cars, virtual and augmented reality, smart homes, smart buildings, and smart cities. 5G is at the heart of the Internet of Things.

How does 5G work?
Like the equipment used for earlier generations of wireless technology, 5G equipment uses radio waves, or radiofrequency (RF) energy. It's the same type of energy that is all around us and that has been used safely for over 100 years. RF energy is used for radios, televisions, cordless phones, cell phones, WiFi routers, and garage door openers. The new 5G equipment includes "small cells," which are low-powered radios attached to antennas. These small cells send and receive information from wireless devices using radio waves. The 5G small cells support both mobile and fixed broadband internet services to homes and businesses.

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How is Verizon building the 5G network?
You may see us installing 5G small cells on poles and at other locations in your neighborhood. The 5G small cells sometimes are physically closer to users and more numerous than the wireless equipment we've used in the past. That's because the 5G radio waves that are capable of supporting very fast speeds and low latency do not travel as far as the radio waves that 4G service uses. So to provide 5G service, we have to use more small cells to cover the same area as 4G service.

What makes it safe?
No matter which generation of technology we use, all Verizon equipment must comply with federal government safety standards. Those standards have wide safety margins and are designed to protect everyone, including children. Multiple federal agencies supported the FCC's adoption of the standards after close examination of the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it.

What do the experts say?
Scientists have studied potential health effects of RF emissions from cell phones for decades. When reviewing the science, experts look at the entire body of scientific evidence, rather than rely on one or two specific studies. That's in part because there may be outliers and some studies, such as one that was recently discussed in a New York Times article, are later determined to be flawed. Based on all the research, federal agencies have concluded that equipment that complies with the safety standards poses no known health risks. And advisers to the World Health Organization have specifically concluded that the same goes for 5G equipment. In fact, the RF safety standards adopted by the United States Federal Communications Commission (FCC) are even more conservative than the levels adopted by some international standards bodies.

I heard that Russia is trying to scare Americans into thinking that 5G is unsafe. Is that true?
Sources linked to the Russian government have produced several media stories, aired in the United States and targeted at U.S. audiences online, alleging that 5G is not safe. A recent article in the New York Times explored the situation. A copy of that article is attached.

Here's the bottom line:
Everyday exposure to RF from 5G small cells will be well within the FCC's safety limit. It is comparable to RF exposure from products such as baby monitors, WiFi routers, and Bluetooth devices. Verizon has a comprehensive program to ensure that our network functions within the FCC's safety limit. Here at Verizon, we are committed to your health and safety as we bring you everything 5G has to offer.

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