



Cellular Phones

Over the years as cellular phones have become more popular, studies were conducted by manufacturers of pacemakers and defibrillators to determine the effect of the phones on these medical devices. Many pacemakers and defibrillators are engineered specifically to resist interference from cellular phones. However, cellular technology is constantly changing. The studies determined that to avoid any potential interference, individuals using cellular phones are advised not to hold the phones directly over their pacemaker or defibrillator.

When certain cellular phones are held too close (within 6 inches or 15 centimeters) to some implanted medical devices, studies indicate that there may be some temporary effects. Potential effects are due to the radio frequency signal of the phone. Any effect would be temporary and simply moving the phone away will return the pacemaker or defibrillator to its previous state of operation.

Because cellular phone technology continues to evolve, and because of the great variety of cellular phones, pacemakers, and defibrillators an absolute recommendation cannot be made to cover every phone and every patient. Therefore, to ensure no adverse effects are encountered, the following standard use guidelines have been developed by the industry.

1. Maintain a distance of 6 inches (15 centimeters) between a hand-held personal cellular phone and the implanted device. For phones transmitting above three watts (such as some portable and mobile cellular phones), a distance of 12 inches (30 centimeters) between the antenna and the implanted device is advised.
2. Hold the phone to the ear opposite the side of the implanted device.
3. Do not carry the phone in a breast pocket or on a belt over or within 6 inches (15 centimeters) of the implanted device as some phones emit signals when they are turned ON but not in use (i.e., in the listen or standby mode). Storing the phone in a location opposite the side of implant is recommended.

Can I use a cellular phone?

Yes. You may already have a pacemaker or defibrillator that is engineered with the newest technology to specifically resist today's cellular phone interference. Even if it does not, or if you are uncertain, simply follow the standard use guidelines (above) when using the phone. These guidelines apply to all cellular phones including pocket phones, portable bag phones, and car phones.

Does a digital cellular phone affect my device more than an analog cellular phone?

Somewhat, but the guidelines for use (above) remain the same for both. Digital phones currently on the market emit a series of pulsating radio frequency signals. Analog phones emit a continuous signal. Pacemakers and defibrillators tend to be more sensitive to pulsating digital signals because these medical devices are designed to detect similar signal from the heart. This is how your medical device knows if and when to deliver your programmed therapy. (For this reason, some medical professionals may recommend an analog phone for pacemaker dependent patients.)

What are medical device developers and wireless industries doing about this?

Studies will be on-going. In addition, new medical devices will be engineered with the newest technology that resists interference from cellular phones. Also, new cellular phones will carry a label about the potential for interference.