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HISTORY OF CELL PHONE BATTERIES AND ADVANCES IN TECHNOLOGY



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By [VA Cell](#)

These days you can't step more than a few blocks outside or drive more than a mile or two down the road without seeing a cell phone in use. Considering the fact that just a few years ago the cell phone was a bulky, seldom used accessory, these marvelous communication devices are a "must have device" in today's Internet and computer-crazy world.

Early Cell Phone Batteries Did Not Last Long

The technology that powers modern cell phones is based on the old two-way radios of the 1940s used in taxis and police cars. The very first cell phone was used in 1946 by the Swedish Police Department. This phone worked using the principles of radio transmissions and was good for six calls before the battery died. This first battery for operating a cell phone was actually a car battery that was hooked directly to the phone, instead of being a separate battery like today's cell phones. Most early cell phones could only be used in a vehicle because they needed such a large amount of battery power.

The small batteries available now had not yet been invented. Plus, these early phones

1950s that weighed an astonishing 80 pounds! By the late 1960s, mobile phones existed that would work in one cell phone calling area only, and they wouldn't work at all once the users got a certain distance away from the assigned calling area. An engineer at Bell Labs developed this technology in the 1970s.

By the time the first prototype of the modern cell phone appeared in 1973, the phone was capable of being used independently and it worked in multiple calling regions. These phones looked nothing like the sleek, tiny flip phones and Smartphones we have now, and they could only run for 30 minutes without the cell phone battery needing a charge.

In addition, these short-lived batteries took a full 10 hours to recharge! Compare this to the current ability of charging your phone via a home electric socket, the charging socket in your car, or even via a USB charge with your computer in just a few minutes.

Cell Phones Evolved and Improved Over Time

During the 1980s, cell phones began to get more popular and a bit more practical, but they were still mostly used in cars due to the large battery needs of the early models. Few could be carried outside of the car, and the phrase "car phone" was the usual term for these devices. A few were built into briefcases, which could also hold the large cell phone batteries needed to power them.

By the 1990s, cell phones and their batteries were getting smaller and the networks to run them were also being improved. Phone systems such as GSM, TDMA, and CDMA came into existence, and there were even digital phone networks in U.S. and Europe by 1991. These phones could be carried around, and advances in making smaller batteries and computer chips to run them made them weigh between 100 and 200 grams, a big improvement from the 20 to 80-pound bricks of the previous years, or the briefcase-sized cell phone batteries required to run them.

Smartphones Revolutionized the Modern Cell Phone

Fast-forward to the year 2016, when just about everyone has a Smartphone. Compared to the first primitive cell phone back in the 1950s, the Smartphone resembles something out of *Star Trek*! You can call a friend, enjoy a video chat, download your favorite tune

chocolates to have delivered to your date. Batteries, too, have come a long way from the cell phone being tied to a car battery. Over the past few decades, there have been several types of cell phone batteries.

Nickel-Cadmium Cell Phone Batteries

Nickel-cadmium batteries or NiCD were the batteries of choice during the 1980s and '90s. The main problem was that they were bulky and heavy, and this made the cell phones large and bulky. Moreover, after you recharged them a few times they built up what is called a “memory effect” and they didn’t always hold a charge. This resulted in dead cell phone batteries, which meant spending increasing amounts of money buying more. These batteries also had a tendency to get hot, which caused disturbances, plus one of the ingredients in the batteries was cadmium, which is toxic and a problem to dispose of after the battery dies.

Nickel-Metal Hydride Batteries

The next round of cell phone batteries were nickel-metal hydride, otherwise known as NiMH, which began to be used during the later 1990s. They were non-toxic and had fewer memory effect issues. Plus, this type of battery was thinner and weighed less. Also, they could be recharged in a shorter length of time and they let users talk longer before they died.

Lithium-Ion Batteries

The lithium-ion battery was developed next. They are still in use today. They are thinner and lighter and last longer. It takes even less time to charge them. They can be made into many different shapes and sizes to fit different styles of cell phones, so any company can use them in their mobile devices. There is no memory effect to worry about, so they can be recharged multiple times, and they are safe for the environment. They are, however, much more expensive than the older battery models.

Lithium-Poly Ion Batteries

The newest development in cell phone batteries is the lithium-poly icon, or Li-Poly battery, which has 40 percent more power than the old NiMh batteries. They are super

batteries are not commonly used as yet, and they are still fairly rare. All in all, the technologies for the cell phone and its battery have come a long way in a relatively short period of time.

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