



## Question

*What is the impact of mobile phones?*

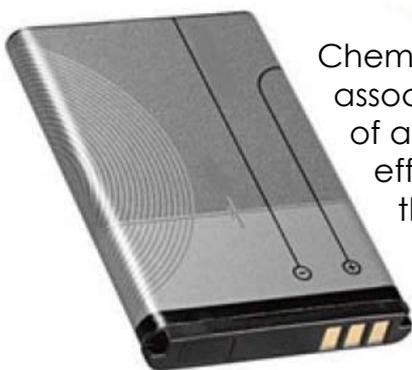
## iToxic

### Fast facts

- \* Each year, Australians discard about 8,000 tonnes of used batteries
- \* 97% of batteries are disposed of through normal rubbish collection points
- \* Only 5% of the electricity used by a phone charger goes to power the phone. The other 95% is lost as “phantom load” when the charger is left plugged in - so unplug your phone charger when you’re not using it!

Mobile phones and accessories contain concentrations of toxic heavy metals or other metals which are Persistent (ie don't degrade in the environment) and Bioaccumulative (ie build up in fatty tissue, so can reach toxic levels over time).

In a landfill when NiCd (nickel-cadmium) battery cases rupture or corrode, in significant quantities, they may leach into the water courses or contaminate the soil and enter the food chain to cause health problems.



Chemicals such as these are associated with a range of adverse human health effects, including damage to the nervous system, reproductive and developmental problems, cancer and genetic impacts.



## Metals found in mobile phone batteries

**Pb**

Lead

**Cd**

Cadmium

**Ni**

Nickel

**Hg**

Mercury

**Li**

Lithium

**Mn**

Manganese

**Zn**

Zinc

**As**

Arsenic

**Sb**

Antimony

**Be**

Beryllium

**Cu**

Copper



## Question

**What is the impact of mobile phones?**

**Cadmium is considered as the 7th most dangerous substance known to man.**

It is a toxic heavy metal that can harm to humans and animals that ingest it, particularly lung and kidney damage. It is also carcinogenic.



**Nickel and mercury** are toxic and are classed as hazardous substances.

Mercury can cause developmental problems in children.

Mercury is also in compact fluorescent and fluorescent tube lights.

**Lead**, if absorbed into the bloodstream in sufficient quantities, will cause serious liver and kidney damage in adults and neurological damage in children.

## What can we do about it?

The mobile phone industry has voluntarily developed the Mobile Phone Industry Recycling Program (MPIRP). The program aims to ensure that potentially toxic components in mobile phones and batteries do not end up in landfill, but rather are recycled.

The recycling process prevents the reformation of environmentally damaging compounds such as dioxins and furans in the exhaust gas stream. It provides a complete breakdown of chemical compounds and is suitable for all phones and batteries including the newer Lithium Ion and Lithium Polymer types.

However in a 2004 published report, the handset manufacturing industry's peak representative body, the Australian Mobile Telecommunications Association (AMTA), revealed that the collection scheme has only caught a fraction of the estimated 5.5 million mobiles retired since it started in 1999.

Make a difference when you dispose of your mobile phone - recycle both the phone and the battery!

Check out Scope's Mobile Phone Recycling School Activity Plan: <http://www.mobilephonerecyclingvic.com.au/schools.asp>. All proceeds go to help people with disabilities.



## Quick Quiz

- \* What is the periodic table symbol for the element zinc?
- \* What kind of flighty material is beryllium also used for?
- \* Where can you take your old mobile phone batteries to be recycled?