

15 ways you can reduce cell phone radiation (#15 added March 2011)

The following list is sorted from lowest cost/easiest solution to the highest cost /hardest solution.

You should try to achieve at least a **10X** reduction in cell phone Radio Frequency Radiation.

The solutions multiply, so a **2X** and **5X** would be reduce RF by **10X**

- Use a speaker phone. Many speakerphones now sound pretty good. **5X-100X**
The use of a speakerphone keeps the cell phone a long way from your brain and body
Note: sometimes use of a speakerphone will bother those around you.
- Alternate which ear you listen to the cell phone with.
This, by itself, will reduce the radiation to each side of your head by **2X**
- Reduce the total amount of time using the cell phone.
Use wired or cordless phone for long conversations. **2X – 20X**
Note: Cordless phones made since about 2001 put out much less radiation
Note: Can use call forward on virtually all cell phones: *72NumberToCall to start forwarding, *73 to stop forwarding
- Minimize use of your cell phone where you have weak signals: possible areas include: rural, in house, in car,....
Cell Phone power level/radiation level can be 100X stronger when you have weak signals (one bar or no bar) – the cell phone has to shout!. **2X-10X**
Very important - You should consider several of these solutions if you must use the cell phone a lot while far from base antenna
- Change network/provider if you can determine that the new provider has a much stronger cell signal in your house -so that the cell phone will no longer have to shout.
3X? - 100X? Also reduces dropouts and dropped calls. Note: The new provider may require a different cell phone.
<http://www.wirelessadvisor.com/> quick way to find providers in your area code
- Use a headset. **5X – 20X cost** \$10 to \$50
Some headsets claim noise rejection. They cost \$30 – \$100
you may want to use a clamp-on RF choke/ferrite bead clamped around the wire
such as at http://www.mercola.com/forms/ferrite_beads.htm
- Buy a cell phone with a very low SAR rating **2X – 10X cost** \$0 to \$100
A cell phone with a SAR of 0.5 has **2X** less RF than a SAR of 1.0.
<http://www.sarvalues.com/usa-complete.html> SAR info – US and UK
<http://stanford.wellsphere.com/wellmix360/cell-phone-sar> SAR info US
- Use cell phone with an **external antenna** connector to reduce dropouts and dropped calls. **30X**. Cost \$20 -\$300.
Note: This external connection tethers you to a wire while in your home.
- Wear a Bluetooth device on your ear or over your head. **5X-20X Cost** \$50 to \$200
Provides hands-free (but not distraction-free) driving, which is now required in most states.
Bluetooth with noise rejection also greatly reduces background noise for your listener.
Top noise canceling models (fall 2008) Motopure and Jawbone II both cost about \$100.
Note1: Some BlueTooth devices cannot be put on quickly enough to answer an incoming call.
Note2: Bluetooth conversations are not as private as with cell, but Bluetooth conversations are probably more private than those using speakerphones.
- Buy a new product called a femtocell for your home. **20X?** Cost approx. \$100 + \$4 per month
This greatly increases the cell signal strength in your home so your cell phone does not have to shout..
Shares DSL internet connection with WiFi.
This solution assumes that most of your cell phone usage is in your home.
Femtocell will eliminate dropouts/dropped calls around the house.
May produce RF all of the time – I do not know - but any RF will be far from your head
http://news.cnet.com/8301-1035_3-10077463-94.html
<http://www.eweek.com/c/a/Mobile-and-Wireless/Verizon-Wireless-Ponders-Femtocells/>
<http://www.thinkfemtocell.com/> added June 2009

<http://www.dslreports.com/shownews/New-Verizon-Femtocell-Service-Is-A-Bad-Joke-100473>

added June 2009

\$250 Verizon - uses DSL and phone must be within 15 feet when initializing a call - a big restriction

<http://3ginthehome.wordpress.com/2009/06/08/femtocell-market-update-for-week-of-1-june-2009/>

- http://www.appleinsider.com/articles/09/09/21/att_3g_microcell_to_cost_150_require_no_monthly_fees.html **update. many providers Sept 21 2009**
- Buy a cell phone signal amplifier or repeater. **20X?** Cost \$100-\$400
This wireless solution which assumes that you have good cell signal outside of your house. Nextivity is one that may be available to buy through your provider in 2009
This assumes that the majority of your cell phone hours are in your home.
Also reduces dropouts and dropped calls. May produce RF all of the time – I do not know.
update Aug 2009 we tried a \$300 Zboost for cell phone and air card (internet) but found that it did not help our reception over that of an external antenna.
- Change the relationship between your cell phone and your head occasionally (angle, height, tilt, rotation, etc.) **2X – 5X**
You want to reduce the amount of RF to specific parts of your body. RF is not like nuclear radiation where you are concerned about total body dose.
- It appears that many SmartPhones, Touchscreen phones, and some recent cell phones use broadband EVDO for voice calls, not just data. **2X - 10X** – where EVDO is available .
Cost \$100 to \$500. EVDO tends to need less RF as it uses more efficient modulation (weaker signal can be used). Should reduce dropouts and dropped calls. Provider may charge extra per month for its use.
- Some Cell Phone and RF hazard links include
<http://www.powerwatch.org.uk/> Cell phone, WiFi, Power Lines, etc,
<http://www.radiationresearch.org/>
<http://www.acrbr.org/>
http://en.wikipedia.org/wiki/Mobile_phone_radiation_and_health
<http://www.fcc.gov/cgb/sar/> FCC
<http://www.ewg.org/cellphoneradiation/Get-a-Safer-Phone?allavailable=1>
Environmental Working Group: lots of data, including on individual phones, and 8 simple tips to reduce RF
<http://www.bluetruth.com/> one of many suppliers of bluetooth devices: over-ear and over-head
<http://www.cellreception.com/towers/> Map of cell phone towers near you (US)
<http://www.phonescoop.com/phones/finder.php> Can select between 93 features.
You can edit your search, so do not need to re-enter the features wanted each time.
Does not have reception quality – I do not know of any web site which does, either.
<http://www.repeaterstore.com/index.html> Cell phone repeater store with variety of products

Cell phone bars are very misleading, vary between cell phones, and the display is typically infrequently updated.

I suggest that you make a dummy/free call every time you want to get an updated view of the cell phone signal level.

More on cell bars: <http://arstechnica.com/articles/paedia/cell-bars-reception.ars>

Update Sept 09

http://en.wikipedia.org/wiki/Mobile_phone_radiation_and_health Wikipedia

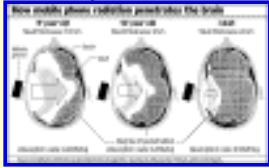
<http://www.radiationresearch.org/pdfs/15reasons.asp> of Sept 09 has a 43 page report "Cell Phones and Brain Tumors -15 reasons for Concern"

on preliminary results of the Interphone Study which had so many design flaws that the Study concluded that the use of cell phones actually DECREASED the the chance of brain tumors.

<http://articles.mercola.com/sites/articles/archive/2009/09/03/Brain-Damage-From-Mobile-Phone-Radiation.aspx>

Mercola Sept 3 2009 which includes the following chart showing the RF getting thru skull of 5 year

old, 10 year old, and adult



Update Dec 2009

Excellent, low cost (\$35) [cell phone meter](#) allows you to easily determine the intensity of RF from your cell phone. You can check the RF output when used with an external antenna (my favorite), close/far for cell phone tower, when used as a speaker phone, etc.

Included a separate probe to check the RF coming from a microwave oven (most new ovens have very little) I bought one and really like it. In addition to having a meter it also blinks and beeps: faster = more RF



Update Feb 2011

[Yet another study](#): Brain near cell phone antenna shows activation due to 1 hour of cell phone use. Journal of American Medical Association Feb 23, 2011: Metabolism increased by 7% on the side of the brain when the cell phone was in use. [Abstract](#) does not indicate if they adjusted for cell phone RF amplitude which varies 100X to 1 with distance to the base station antenna.

Update March 2011 - actual science!

#15 - do not wear cell phone on belt in the same location all of the time

[A study in Argentina](#) found that after just 1 year men with cell phones on a belt had noticeably different bone mineral density on the bone nearest the cell phone. A cell phone puts out much less radiation when it is not being used, but it appears that it is a significant amount over the space of a year = 4000+ hours

[CLICK HERE](#) for the 5 page paper

Update March 2011

The portion of the brain next to cellphone used more 7% more glucose. probably consumes far more than 7% in real use:

- 1 - Abstract does not indicate how close the cell phone was to a cell tower - and that can vary the RF amplitude by 100X
- 2 - There was no voice - so far less RF
 - cell phones conserve power by transmitting very short bursts when there is no voice.

[JAMA March 2011](#). This article was commented on in the [New York Times](#)

Update May 2011

WHO report was included in [Wikipedia](#) excellent overview the same day

Started November 2008 updated thru May 2011 [jump to home page](#)