

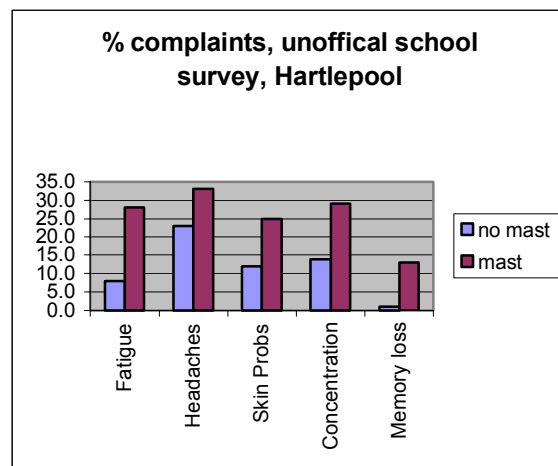
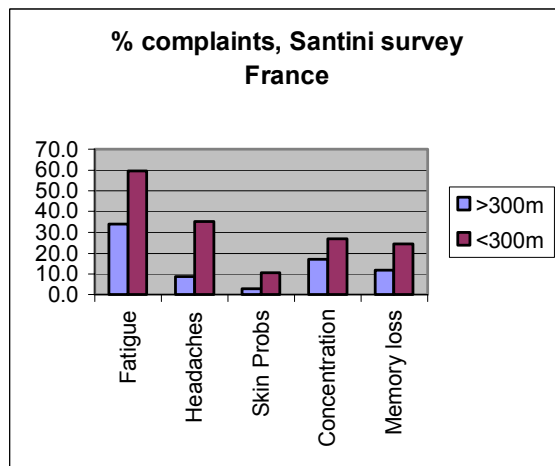
Phone masts and mobile phones – “no evidence of a health risk”. Really?

In 2000, mobile operators paid the govt £22.5 billion for new 3G mobile licences. To see its profit the industry now needs to build thousands more 3G masts - not for existing phones but for **new** mobile services it hopes to sell to us.

The **industry** says there is **no risk** but scientists will not guarantee phone **masts** and mobiles and are safe. Insurance companies will **not** cover the risks. So - there must be a lot of **conflicting** studies about phone masts, right? **Wrong.**

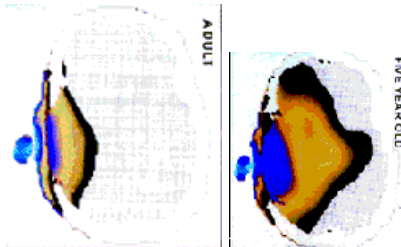
There are **only SIX** known studies purely of the effects of **phone masts on people!** All show ill-health effects:-

- 1) **Dutch** TNO study 2003; effects on **wellbeing**-headaches, muscle fatigue/pain, dizziness etc from 3G mast
 - 2) **Oberfeld** 2004 Spain, found depression, **fatigue**, **sleeping** disorder, **concentration**+**cardiovascular** problems
 - 3) **Wolf** (2004) found **fourfold** cancer increase within **350m** of a phone mast, **tenfold** among women.
 - 4) **Naila** study Germany (2004) found **trebled** risk of cancer near cellular antenna/masts
 - 5) **Austria** 2005, found illness+measured immediate changes of **electrical currents** in the brain at 80m from mast
 - 6) **Santini** 2002; Diverse health effects **within 300m** of base stations-see below. (Reference: www.starweave.com)
- Each of these results was statistically significant ie unlikely(a 1 in 20 chance) to be due to chance (**Rough** idea-20 to the power of 6 is 64 million)



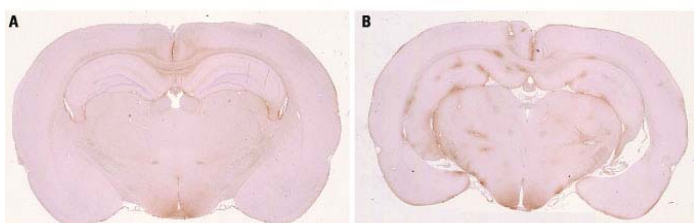
Left-Health complaints higher near phone mast. **Right**-Similar results from comparison of 2 schools **with+without** mast, www.powerwatch.org.uk

Similar complaints are made by **mobile phone users**. A 1998 Swedish study [1] of 11,000 mobile users found the same symptoms: more mobile use meant **Memory Loss**, Difficulty **Concentrating**, **Headache** and **Fatigue**. Hardell (2005) found **40% increase in brain tumors** after 5 years of above average mobile use (analogue,digital+cordless*). 2 studies found acoustic neurinoma** was double in mobile users and x4 when on the same side as the phone ear [9]



Children are more vulnerable as is officially recognised-their nervous system is still developing and their cells divide faster. Their smaller heads and thinner skulls absorb more radiation. Mobile phones have a greater effect on a **child's** brain (see left). A CATEEM scanner/machine measuring brainwave activity shows radiation (blue) spreading through the brain towards the other ear [2]. Disturbed brainwave activity lasted up to an hour after the call ended. Yet the industry sites masts near schools, gardens and on top of **baby wards**. It has **targeted children** with mobiles for the U-8s(withdrawn), Disney content+actively promotes youth mobile products.

Mobile phone radiation shown to damage brain cells



- Salford(2003) attached mobiles to rats cages for **two hours**. Fifty days later (right) their brains show blood vessel leakage, areas of **shrunkened, damaged neurons** [4]. Salford, a neurosurgeon, warned of the danger of **early senility + Alzheimers**. This and cancer concerns echoed by **doctors** and the **California report** (over).
- Three rodent studies showed increases in **cancer** with microwave exposures.

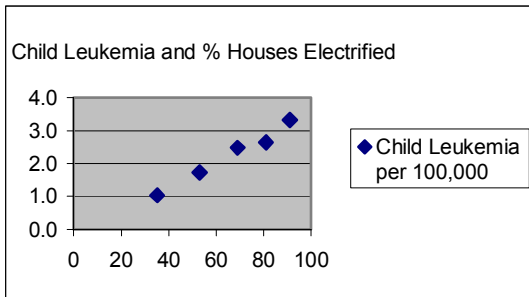
Microwave radiation damages human chromosomes+DNA (see picture [7]). **Dozens** of studies show 1) it reduces **melatonin** which is needed by the **immune system** to **prevent cancer** and for healthy sleep (+reduces cholesterol+ blood pressure) 2) alters blood flow+disturbs chemical balance in the brain, allows toxins to pass from blood to brain fluid-may underlie **headache** [4,6]. Masts/phones **raise** blood pressure-Lancet. Marinelli-24 hr exposure to mobile radiation made cancer cells **replicate** ferociously.Rats pre-treated with **melatonin** survived lethal gamma radiation[5]

UK vs other countries Australia+New Zealand **banned masts** within 500m of state schools. New South Wales banned them within 500m of child care centres, hospitals+nursery homes. Russia **outlawed** mobiles for U-16s. Italy, Sweden, Luxembourg adopted lower output limits-Salzburg's is 10,000 times less than the UK. The UK limit is 45 times the level where Russian workers are required to wear protective goggles. Toronto's limit is 1/70th of the UK.

*Unlike mobiles **DECT** units emit **maximum power** even when phone not in use-'a **phone mast in your living room**' [8]-and your **neighbour's!**

Acoustic neurinoma is a **rare brain tumour, but one that is found more quickly than other brain tumours because it affects hearing.

Background - Electromagnetic Fields (or EMFs)



Electromagnetic Fields - EMFs (or EMR)

(Microwave emissions from mobiles/masts are **types** of EMF)

- **EMFs and child leukemia** Milham (2001) showed that the development of child leukemia in the various US states closely matched the pattern of **domestic electrification** (see left).
- **They'll protect us - wont they?** The government has known for 3 years that residential magnetic exposures of 0.4 μ T **double** the child leukemia rate.
- **In March** it **reduced** the limit from 1600 to 100 μ T, ...ie to **250 times** the level known to double child leukemia.
Does that answer your question?

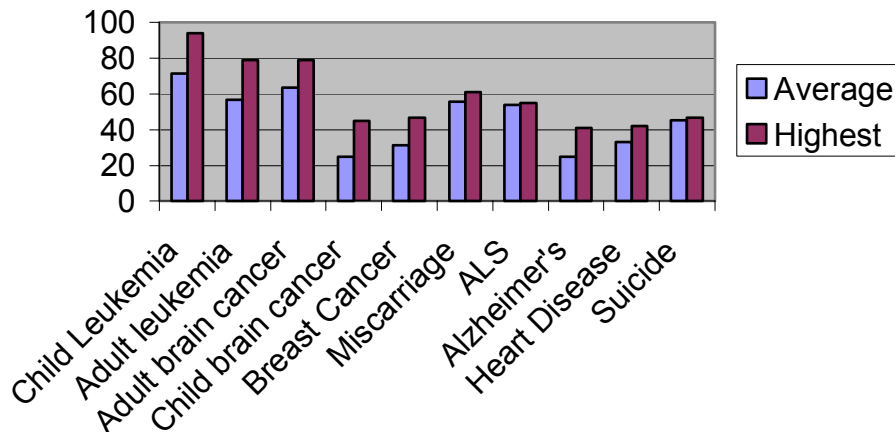
How responsibility for health **vanished** behind commercial considerations

- Radiation and EMF safety limits were set in 1998 by an international committee called **ICNIRP**.
- Here is the **relevant** part of ICNIRP-“..Induction of **cancer** from **long-term** EMF exposure was **not considered** to be established, and so these guidelines are based on **short-term, immediate** health effects”.
- ICNIRP **only** covers effects that are **short term** and **thermal** - due to the effect of **heating. It says so!**
- Widely-reported **health** effects like headaches, fatigue, memory/concentration loss were not **mentioned**.
- But the Stewart Report(2000) still recommended ICNIRP and concluded **mobile/mast** emissions dont cause adverse health effects *because they are below ICNIRP levels*—levels that **excluded** these effects anyway!
- Now **illogically** the Stewart report and ICNIRP guidelines are used as evidence that mobiles+masts are safe!
- So..ICNIRP/official limits are **irrelevant** to cancers, headaches etc - to quote them in this way is **misleading**
- The **hundreds** of studies included here indicate **health effects** of EMFs at levels **well below** ICNIRP limits.
- Stewart also said caution needed **near schools** but this part is ignored,2000+ schools have mast within 200m
- **Independent** scientists were *scathing* of the ICNIRP dismissal of ill health effects; there were “strong **political /economic** reasons for **wanting** there to be no health effect”.. “blatantly incorrect.. **biased**..a serious misinterpretation of the facts..the cancer assessment is **misleading**,inappropriate and flawed..risk assessment based on a **house of cards**..highly selective.. unscientific” [Dr Don Maisch, Dr Gerard Hyland, Dr Neil Cherry eg [4]]

Contrast this with the more balanced risk evaluation report **below** which was produced to **inform** US policy:

California Risk Review 2002

3 experts 'degree of certainty' that EMFs increase disease risk
[http://www.dhs.ca.gov/ehib/emf/RiskEvaluation/riskeval.html]



This 1000-page **risk report** was only put online after **court threats** under the 1st amendment

The blue bars show the **degree** to which the experts believed EMFs **increased** the risk of each illness eg they were 70% sure EMF increased the risk of child leukemia, 55% sure they increased risk of miscarriages.

The experts reviewed all the studies, some of which were themselves reviews of previous studies. **Before** the study they gave the chance that EMFs caused noticeable increases in such diseases as **only 10%**.

They were swayed by the **evidence**. Of the studies referenced for the 10 illnesses, **131** found higher risk, **36** found lower risk. If these illnesses are unrelated to EMFs, this outcome would be a **million-to-one** chance.

Alarmed medical groups: 1) **The Freiburger appeal**-1000+ doctors call for “new regulations to halt the **devastating** health consequences of pulsing EMR ”.. “a dramatic rise in severe+chronic diseases.. concentration+learning disorders, Extreme fluctuations in **blood pressure**, **Heart attacks**+strokes in an increasingly **younger** population, Brain-degenerative diseases/Alzheimers,epilepsy, **leukaemia**, **brain tumours**, **migraines**..” 2) Finland: **Helsinki Appeal 2005** calls for **rejection** of ICNIRP guidelines 3) **Irish Doctors Environmental Assoc** [IDEA] states **thermal** limits/**mast** policy **inappropriate**-cites 70 studies in 14 categories eg DNA, nerve cell damage+**cancers**[3]

Summary •No-one disputes EMFs cause **biological effects** •Many damage mechanisms are well-established. •The six **mast studies** alone are **overwhelming evidence** of a health hazard, and the above EMF studies **agree** as well as many **doctors** •The ICNIRP safety (!) limits **only cover heating effects** and didn't take these concerns into account.

References [1] Dr Neil Cherry, <http://pages.britishlibrary.net/orange/cherryonexplevel.htm> [2] Ghandi 1996, Sunday Mirror 2004 [3] <http://www.ideaireland.org/emr.htm> [4] <http://pages.britishlibrary.net/orange/biologiceffects.htm> [5] Vijayalaxmi 1999 [6] Dr G Hyland [7] www.washington.edu/alumni/columns/march05/wakeupcall02.html [8] www.tetravatch.net [9] Hardell (2003), Lonn (2004) **More info: Campaign groups:** www.mastsanity.org, www.scrum.uk.com, **Victims** <http://www.mast-victims.org/>