



Background and Facts Documenting PhoneGate and Our Call for Congressional Action

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Introduction to PhoneGate

The international NGO, PhoneGate Alert Association, as well as Environmental Health Trust and other public health organizations have documented evidence that for nearly 30 years, manufacturers have been placing cell phones on the market under deceptive testing conditions, posing a risk to the health and safety of billions of users.

This new public health scandal has a name: "PhoneGate." The FCC's decades old cell phone test method in use today allows phones to pass pre-market regulatory exposure tests despite the fact that the very same phones would not pass if the tests ensured phones were tested the way they are used - in positions of body contact as when worn and used in pockets or tucked into waistbands or bras.

The tests used by manufacturers and regulators have not taken into account the real world conditions of use in the calculation of the SAR (Specific Absorption Rate) value; i.e. the metric used to evaluate microwave radiation exposure from cell phones to the human body. Real world conditions include contact with the body when phones are carried or used in shirt or pants pockets or tucked into bras and waistbands.

Despite the fact that phones are not tested in positions of body contact, cell phone companies still advertise phones in positions that result in consumers thinking phones are safe in any position.

This issue must be investigated in light of the deployment of 5G networks in the United States which will include billions of new interconnected devices in addition to 5G connected cell phones. How can we allow all of these new devices on the market when they are not pre-market tested for cell phone radiofrequency SAR compliance the way we use them- in close body contact?

Deception by cell phone manufacturers and serious shortcomings of regulators

In the United States cell phones are tested for compliance with radiofrequency SAR limits using test protocols which allow the phone to be placed at a distance of 5 to 25 mm from the simulated body "phantom." Phones are not required to be tested in positions of body contact as they are used by consumers.

In addition, the U.S. government does not perform independent cell phone compliance testing, allowing each manufacturer to submit their own SAR testing results to the FCC. Manufacturers in the US and worldwide do their own testing on an "honor system."

Recent investigations find manufacturers' test reports differ from independent testing and many phones exceed regulatory limits when tested at body contact.

In August of this year, the [Chicago Tribune](#) published the results of their investigation into the SAR levels of the top-selling U.S. phones when tested held 5-15 millimeters away from the testing device as FCC exposure testing guidelines allow:

"This test, which was...conducted according to federal guidelines at an accredited lab, produced a surprising result: Radiofrequency radiation exposure from the iPhone 7 — one of the most popular smartphones ever sold — measured over the legal safety limit and more than double what Apple reported to federal regulators from its own testing.

The Federal Communications Commission, which is responsible for regulating phones, states on its website that if a cellphone has been approved for sale, the device "will never exceed"

the maximum allowable exposure limit. But this phone, in an independent lab inspection, had done exactly that.”

Phones were additionally tested held 2 millimeters away from the testing device to simulate the way phones are typically used against the torso (as in shirt and pants pockets), and the results were even more alarming:

“The 2-millimeter distance was chosen to estimate the potential exposure for an owner carrying the phone in a pants or shirt pocket. Under those conditions, most of the models tested yielded results that were over the exposure limit, sometimes far exceeding it.

At 2 millimeters, the results from a Samsung Galaxy S8 were more than five times the standard.”

Excessive radiation levels have been well documented by the Government of France

The French government French National Frequencies Agency (ANFR) has tested hundreds of cell phones for radiation levels since 2012. However, unlike regulatory compliance tests, the ANFR tests were performed with the phone in several positions, including at body contact. The results were not publicly known until 2016 after pressure from legal actions of French physician Dr. Marc Arazi and the PhoneGate Alert Association. At this time, the SAR test data on over 454 cell phones has been released.

These tests revealed that 90% of cell phones tested in 2015 exceeded regulatory limits when tested at body contact. In fact, the *majority* of tested phones exceed the SAR “on the body” value. These results were kept secret from consumers. The data can be found [here](#).

Although the U.S. has stricter mobile phone radiofrequency compliance limits than Europe, we expect most of the U.S. phones would exceed FCC standards when tested in body-contact positions. In fact, when the ANFR data was [analyzed](#) using US FCC test protocols the excesses were as high as 11 times.

Regulatory timeline of FCC’s failure to provide oversight regarding consumers’ phone use in pockets – manufacturers are selling phones that are not compliant with exposure “safety” guidelines

From the 1970s to the 1990s, the U.S. Environmental Protection Agency (EPA) was researching and developing radiofrequency radiation (RFR) limits. In 1996, just as the EPA was [set](#) to release their [Phase 1](#) of safety limits, the EPA’s RFR efforts were defunded, halting all EPA research. That year the U.S. Federal Communications Commission (FCC) [adopted RFR exposure limits](#) based largely on limits developed by industry/military connected groups ([ANSI/IEEE C95.1-1992](#) and [NCRP’s 1986 Report](#)). Cell phone test protocols to ensure compliance with the limits used, and still use, simulated body “phantoms” representative of a large adult male and more importantly position the phone at a separation distance from the body.

The most recent U.S. federal hearings on cell phones were over a decade ago. Notably, the issues we are raising today were brought to light. For example, Dr. Devra Davis presented the fact that manufactures state in fine print that consumers should maintain a distance from the device in the 2009 Senate Appropriations Committee Hearing [“Health Effects of Cell Phone Use.”](#)

In the 2008 hearing "[Health Effects of Cell Phone Use](#)" of the US House Oversight and Government Reform Subcommittee on Domestic Policy, FCC's Julius Knapp was asked about wireless devices such as routers in the home, and he responded that, "*Generally, there are two things that reduce any risk from those kinds of products: the lower power level and the separation. So we don't have those products up against our bodies.*" However, people are unaware that wireless devices, including cell phones, should not be used directly against their bodies.

Following these hearings and the 2011 WHO IARC classification of radiofrequency as a "possible" human carcinogen, Representatives Henry A. Waxman, Anna G. Eshoo and Edward J. Markey requested the U.S. Government Accountability Office (GAO) update information related to mobile phone health effects and regulatory issues related to compliance with the radiation limits. In turn the 2012 [GAO report](#) directed the FCC to review the human exposure cell phone radiation limits and to update their cell phone testing protocol because they found it allowed for consumers to receive SAR levels that possibly exceed the "on the body" exposure guidelines.

FCC takes no action on the recommendations of the US Government Accountability Office

In 2013, the FCC opened a [proceeding](#) and received over one thousand comments and research citations from scientific and medical experts, consumer advocates and concerned citizens. (ET Dockets [No. 13-84](#) and [No. 03-137](#)). In these past seven years, the FCC has taken no action on the proceeding to re-evaluate the 23 year old exposure testing and guidelines...until the release on December 4th, 2019 of their [formal proceeding](#) to terminate their review and maintain the status quo.

In 2018, the GAO had updated the status of their [2012 recommendations to the FCC](#) as "Closed – Not Implemented."

The FCC and FDA have been informed, but fail to take action

In March 2018, Dr. Arazi, president of the PhoneGate Alert Association, and Dr. Devra Davis, President of the Environmental Health Trust, jointly addressed a letter to the FCC, asking for a revision of the 1996 standards, taking into account the documentation from France showing limits are exceeded "on the body" contact positions.

The FCC still has not replied to this [letter](#).

Organizations have written the FCC and FDA for years prior. For example, the FDA acknowledged the findings showing violations of regulatory limit at body contact in the French cell phone tests when Theodora Scarato [communicated with the FDA](#).

The FCC refuses to correct their faulty cell phone testing protocol that allows consumers to be exposed to RF radiation that exceeds federal "safety" limits – declares that people should use belt clips and holsters to keep the phone away from their body

On December 4th, the FCC released [a formal proceeding](#) stating, "*Even though some parties claim that the RF exposure evaluation procedures for phones should require testing with a "zero" spacing – against the body – this is unnecessary.*" The FCC's justification for maintaining their 23 year-old, obsolete exposure testing procedures is quoted below:

*“We also decline to revisit our RF exposure evaluation procedures for consumer portable devices, especially phones. Current evaluation procedures require consumer portable devices to be tested...at a separation distance of up to 2.5 centimeters (about one inch) from the body **to represent phone use in other ways**”.* ⁴⁶

The FCC’s footnote makes reference to an FCC document that describes the testing protocol for cell phones when simulating use directly against the torso. Exactly what are the “other ways” of using a cell phone mentioned to justify manufacturers testing their phones up to 1 inch away from the body? Why would the FCC allow this separation distance at testing INSTEAD of requiring that phone manufacturers test them with no separation distance to more accurately simulate typical use directly against the body as in a pants or shirt pocket?

The referenced FCC document states,

*“This distance is determined by the handset manufacturer according to the typical body-worn accessories users may acquire at the time of equipment certification, but not more than 2.5 cm, to enable users to purchase aftermarket body-worn accessories with the required minimum separation....**Devices that are designed to operate on the body of users...without requiring additional body-worn accessories** must be tested for SAR compliance using a conservative minimum test separation distance ≤ 5 mm to support compliance.”*

And, the “body-worn accessories” that manufacturers claim their customers must use to keep the radiating phones at the “as-tested” distance from their bodies?.... From the FCC’s own testing protocol, **“for example, beltclips and holsters for cellphones”**.

How many consumers under the age of 60 still use beltclips and holsters to keep their cell phones up to an inch away from their bodies? And, none of the most popular cell phones sold today provide their users these required “body-worn accessories” nor do they warn their customers about the danger of carrying or using their phone closer to the body than the separation distance used at testing.

The FCC proceeding also states:

“...our existing exposure limits are set with a large safety margin, well below the threshold for unacceptable rises in human tissue temperature. Thus, even if certified or otherwise authorized devices produce RF exposure levels in excess of Commission limits under normal use, such exposure would still be well below levels considered to be dangerous, and therefore phones legally sold in the United States pose no health risks.”

In the above FCC statement, the FCC provides no documentation as to what the “safety margin” is or what the “levels considered to be dangerous” are.

The FCC’s testing regulations should simply ensure compliance with their existing exposure “safety” limit and require that phones be tested held directly against the body with no separation, rather

than point to unknown “dangerous” levels to justify their reckless decision to allow cell phones to continue to be tested with up to a 1 inch separation distance.

The FCC is failing in its regulatory duties

The FCC is failing in its regulatory duties to protect consumers and instead is setting policy to protect the cell phone manufacturers [whose phones exceed the federal safety exposure guidelines by over 500% in some cases](#) when tested as consumers are using them: directly against the body in shirt and pants pockets and tucked into waistbands and bras.

The world-wide scientific debate continues regarding the potential serious public health impacts of wireless exposure

As you are aware, the cell phone industry is in the process of rolling out the new, [untested](#) 5G wireless technology while the [world-wide scientific debate](#) continues regarding the potential serious public health impacts from the ever-increasing, continuous exposure to pulsed microwave and millimeter wave signals.

The results of the FDA-sponsored, U.S. National Toxicology Program (NTP) \$30 million study on rats and mice exposed to whole-body 2G and 3G cell phone radiofrequency radiation were released on November 1, 2018. The peer-review panel of scientific experts confirmed [“clear evidence”](#) of an association between cell phone radiation and heart tumors (malignant schwannomas) in male rats, some evidence of tumors (malignant gliomas) in the brains of male rats and some evidence of tumors in the adrenal glands of male rats.

The above-mentioned NTP study also found [“significant increases in DNA damage.”](#) Follow-up studies by the NTP to investigate mechanisms of genetic damage associated with cell phone exposure are underway.

These results showing “clear evidence” of cancer from 2G and 3G exposure to laboratory animals call into question the relevance of the FCC’s current 23 year old exposure guidelines in protecting the public from 4G, and now 5G technologies.

Two decades ago the FDA [stated](#), *“a significant research effort, involving exposures of large numbers of animals to the various types of cellular phone modulation in current on expected use, coupled with epidemiological surveillance of exposed populations, is needed to provide a further basis for risk assessment of these devices.”* However, the FDA recently [rejected](#) their own agency-sponsored study’s conclusions, arguing that NTP exposures were not relevant to humans as it was an animal study, [despite](#) the fact that the agency had [requested](#) the studies and approved the specific design a decade earlier.

[In June 2011, IARC](#) had decided to place radiofrequency waves in class “2B”, “possibly carcinogenic to humans”, on the basis of an increased risk of glioma, a type of malignant brain cancer associated with cell phone use. After publication of numerous studies, including the NTP study, experts considered that RF radiation should be reassessed with high priority. Some scientists are even [calling for a reclassification](#) in group 1: “carcinogenic”.

On November 7, 2019, the IARC report listed the agents whose carcinogenicity is to be assessed or reassessed during the period 2020-2024. Reassessment of non-ionizing radiation (radiofrequency) will be given high priority (ready for evaluation within 5 years).

Results of PhoneGate Alert actions in France and Europe

As a result of PhoneGate Alert's legal actions in France since April 2018, a total of 18 cell phone models have been withdrawn from the French market or updated for exceeding the SAR threshold.

On October 21, 2019, the French Agency for Food, Environmental and Occupational Health & Safety (ANSES), issued an opinion entitled, "[Exposure to mobile telephones carried close to the body](#)", recommending that:

- measures be taken to ensure users are no longer exposed to cell phone radiation levels that exceed regulatory limits
- consumers are educated about the manufacturers' instructions for a separation distance
- compliance testing of emissions be updated so that cell phones' radiation tests are performed in positions of body contact.

The authors of the opinion extend their recommendations to other radiofrequency emitting devices, including toys and tablets.

In response to the ANSES opinion, the French ministries of Health, Ecology and Economy issued a [joint press release](#) on October 25, 2019 announcing:

- France will ask the European Commission to strengthen the requirements applicable to new mobile phones placed on the market. The Government will request that the certification tests be carried out in contact with the device (at 0 mm), and not at 5 mm as is currently the case.
- ANFR will develop tools to inform consumers about the emissions of their phone and manufacturers' recommended distance
- The Government will bring together the manufacturers to engage in a voluntary action to update the software of their models so they meet new emission test guidelines.
- The Government also reminds users of its 6 recommended practices to adopt when using a mobile phone to reduce their exposure to radiofrequency radiation including use of a hands-free kit to keep the phone away from the head.

[Legal actions in progress against cell phone companies](#)

Within the context of PhoneGate, class actions against cell phone manufacturers have been filed in 2019 in the United States, Canada and France. The first two actions were filed in France against Xiaomi and HMD GLOBAL OY (marketer of Nokia phones) for exceeding the SAR European regulatory limit of 2.0 W/kg. In addition, four new Nokia smartphone models, placed on the market from June 2018, violated the European regulation (directive 2014/53/EU) requiring since June 2016 that the SAR torso be tested at a maximum distance of 5 mm. These four models were measured at 15 mm from the body. The Finnish company also failed to comply with the obligation to provide information on the SAR value and measurement distance in its manuals.

Following publication of the Chicago Tribune's investigation revealing the results of radiation tests on popular mobile phones, a first class action was filed on August 23, 2019 against Apple and

Samsung before the U.S. District Court for the Northern District of California in San Jose, alleging that certain iPhone and Samsung smartphone models exceed the U.S. SAR regulatory limit of 1.6 W/kg.

The plaintiffs also allege that Apple and Samsung market their mobile phones on the assumption that the devices can still be close to their bodies, i.e. in a pocket, and say that older iPhone models had a warning for users to carry their devices at least 10 mm from their bodies. However, more recent models have not provided such advice to consumers. Samsung's marketing material for their devices "implies" that keeping or carrying their phone close to the body is safe.

On September 10, 2019, a new class action against Apple and Samsung was filed by Andrus Anderson LLP in San Francisco, California. Law firms in Illinois and Iowa have joined Andrus in alleging that Apple and Samsung put their clients' health at risk by designing products that emit heightened levels of RF radiation.

On September 5, 2019, a class action against Apple and Samsung was filed in Montreal, Canada, alleging that the radiofrequency radiation of Apple and Samsung phones exceeds the limit legally allowed by the Canadian government.

Congress must take action NOW to protect public health

In this context and in the absence of a response from the FCC, ***we are asking you to support our request for a Congressional hearing to investigate:***

- Industry's deceptive actions with respect to marketing phones that exceed federal safety guidelines.
- Obvious lack of federal regulatory oversight by FCC to ensure that phones are tested as they are being used by today's consumers – in direct contact with the body.
- Setting up major public information and prevention campaigns, particularly targeting young people and pregnant women.

The PhoneGate Alert Association has a [scientific advisory committee](#) of researchers and scientists of international renown including Dr. Devra Davis.

Please do not hesitate to contact us and/or the scientific committee for additional information and any questions you may have.

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