



Community Health Commission

ACTION CALENDAR
November 8, 2011

To: Honorable Mayor and Members of the City Council
From: Community Health Commission
Submitted by: Tasha Tervalon, Secretary to the Commission
Subject: Third-Party Public Education Materials on Department of Public Health Website

RECOMMENDATION

Adopt a Resolution authorizing that the City of Berkeley Division of Public Health post on its website links to the World Health Organization (WHO) and other reputable sources on information regarding cell phone radiation at the discretion of the Health Officer.

FISCAL IMPACTS OF RECOMMENDATION

None.

CURRENT SITUATION AND ITS EFFECTS:

The World Health Organization declared cell phone radiation a possible human carcinogen in May of 2011.

The Community Health Commission adopted the following recommendation:

M/S/C (Morris/Franklin) Submit a council resolution requesting Council adopt a resolution recommending that the City of Berkeley Division of Public Health post on its website links to the World Health Organization (WHO) and other reputable sources for information regarding cell phone radiation at the discretion of the Health Officer.

Ayes: Franklin, Morris, Speich, Tempelis, Webster

Abstain: None

Absent: Falwell, Hidrobo, Lam, Riordan

Excused: Cornish, Williams

BACKGROUND

The number of mobile phone subscriptions is estimated at 5 billion globally. Scientific Support: In the last several years, there has been mounting concern over the possibility

of adverse health effects resulting from exposure to radiofrequency electromagnetic fields, such as those emitted by wireless communication devices.

In May 2011, a Working Group of 31 scientists from 14 countries met at the International Agency for Cancer Research (IARC) in Lyon, France to assess the potential carcinogenic hazards from exposure to radiofrequency electromagnetic fields. These assessments will be published as Volume 102 of the IARC *Monographs*. Volume 102 will be the fifth volume in this series to focus on physical agents. Previous volumes have addressed the health effects of Solar Radiation (Volume 55), ionizing radiation from sources such as x-ray, gamma-rays, neutrons and radio-nuclides (Volume 75 and Volume 78), and non-ionizing radiation also known as extremely low frequency electromagnetic fields (Volume 80).

The IARC Monograph Working Group discussed and evaluated the available scientific literature on the following exposure categories involving radiofrequency electromagnetic fields:

- occupational exposures to radar and to microwaves;
- environmental exposures associated with transmission of signals for radio, television and wireless telecommunication; and
- personal exposures associated with the use of wireless telephones.

The IARC Monograph Working Group determined that there is evidence linking wireless phone use with an increased risk of gliomas and acoustic neuromas. The number of mobile phone users is large and growing, particularly among young adults and children. **(WHO, 2011)**

Research presented to the EHT's Istanbul Conference from the Gazi Biophysics Department in Turkey found that prenatal exposure to cell phone radiation causes brain, liver and eye damage to baby rabbits and rats and impairs sperm count and health. **Environmental Health Trust, "Environmental Health Trust Lauds San Francisco for Saving Right-to-Know on Cell Phone Radiation," July 12, 2011.**

Local Legislation: The San Francisco Board of Supervisors has been working on their "Right to Know" legislation since 2009. On July 11 2011, the Community Operations and Neighborhood Services Committee of the San Francisco Board of Supervisors unanimously approved legislation requiring businesses to provide safety information about cell phone radiation to customers before they purchase cell phones.

In response to a lawsuit threat from CTIA, San Francisco re-wrote their "Right to Know" legislation.

The President of the Environmental Health Trust recently summarized the revisions as follows: "The original legislation simply required posting radiation levels. This improved bill will give people important information on how to reduce radiation exposures—a matter of grave importance for pregnant women and young men wanting to become fathers."

Environmental Health Trust, “Environmental Health Trust Lauds San Francisco for Saving Right-to-Know on Cell Phone Radiation,” July 12, 2011.

RATIONALE FOR RECOMMENDATION

The number of mobile phone subscriptions is estimated by the World Health Organization’s (WHO) International Agency for Cancer Research (IARC) at **5 billion globally**. In May 2011, IARC declared that cell phone radiation, like engine exhausts and certain pesticides, should be considered a possible human carcinogen.

As stated by the WHO, this information has relevance for public health, as the number of mobile phone users is large and growing, particularly among young adults and children.

Berkeley is home to tens of thousands of students and many families with children that are currently at increased risk from mobile phone use. The Berkeley City Council has an opportunity to provide information to its residents to protect their health. At the heart of the principles and practice of the City of Berkeley is its belief and ongoing adherence to the Precautionary Principle.

The City Council has pursued “Right to Know” legislation modeled after the San Francisco regulations. The Berkeley City Council solicited information, research, and ideas from the Community Health Commission, Youth Commission and the Community Environmental Advisory Commission to inform its actions regarding “Right to Know” legislation.

The Community Health Commission and Division of Public Health play pivotal roles on this issue due to the potentially adverse health effects from inaction.

Resolutions similar to this one are currently being adopted by city and county jurisdictions across California and the nation. The Berkeley City Council should fulfill its responsibility to protect the health of their constituents by passing similar legislation. The Berkeley City Council should also provide citizens with information on the link between mobile phones and cancer and ways to protect themselves through information posted on the Department of Public Health website.

ALTERNATIVE ACTIONS CONSIDERED

None.

CITY MANAGER

The City Manager concurs with the Commission’s recommendation specific to authorizing the posting of reputable third party information on the Public Health Division’s website relative to this matter, at the discretion of the Health Officer. However, the City Manager takes no position on the Commission’s findings relating to the health risks associated with cell phone radiation.

CONTACT PERSONS

Tasha Tervalon, Commission Secretary, 981-5347

Pamela Speich, Chairperson, Health Commission, 548-1912

Attachments:

- 1) Resolution
- 2) EHT document: Practice Safe Phone Use
- 3) WHO Press Release #208: IARC Recommendation

RESOLUTION NO. -N.S.

THIRD-PARTY PUBLIC EDUCATION MATERIALS ON DEPARTMENT OF PUBLIC
HEALTH WEBSITE

WHEREAS, the World Health Organization has declared that cell phone radiation, like engine exhausts and certain pesticides, should be considered a possible human carcinogen; and

WHEREAS, initial "Right to Know" legislation drafted by the City of San Francisco caused the CTIA to threaten a lawsuit against that City and resulted in a re-draft of said legislation; and

WHEREAS, Berkeley City officials are currently considering "Right to Know" legislation modeled after the San Francisco legislation; and

WHEREAS, there continues to be a substantial delay in notifying Berkeley citizens about the health risks involved with mobile phone use and ways to protect themselves; and

WHEREAS, the City of Berkeley is committed to the health and wellbeing of its residents.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Council recommends that the Division of Public Health post on its website links to the World Health Organization (WHO) and other reputable sources for information, at the discretion of the Health Officer, regarding cell phone radiation.

Environmental Health Trust

Join us in making prevention the cure

“PRACTICE SAFE PHONE”

www.ehtrust.org

In 2011, the International Agency for Research on Cancer, an expert arm of the World Health Organization, classified radiofrequency electromagnetic fields (rf emf's) a possible carcinogen based on an increased risk of glioma, a lethal brain tumor, associated with long term cell phone use.

Below are precautions that you and your family can take if you are concerned about the potential long term health risks of cell phone use.

1. **Read the fine print in your user's manual** that tells you the safe distance to which to hold the phone in order to not exceed the allowable amount of radiation your body can absorb.
2. **Children should not use a cell phone except for emergencies.** In the event they must use one they should never hold it directly to their head or keep it on while on the body.
3. **Never hold the phone directly to your head or keep in “on” mode while on your body** (do not carry it while on in a pocket or in a bra).
4. **Limit your use.** Use your cell phone less and a **corded landline** more often.
5. **Text more often** but not while driving.
6. **Do not sleep with your cell phone in “on” mode near your head or body** (under your pillow or on your nightstand should be avoided)
7. **Avoid use in moving vehicles, elevators, and rural areas,** as the weaker the signal the stronger the radiation emitted.
8. **If using a Bluetooth ear device,** do not position the phone on your body and do not leave the Bluetooth on when not in use.
9. **If pregnant, keep the phone when “on” away from your abdomen.**
10. **Use a wired headset, speakerphone or retro headset** as often as possible.

ALWAYS TAKE INTO CONSIDERATION THAT “DISTANCE IS YOUR FRIEND”.

International Agency for Research on Cancer



PRESS RELEASE
N° 208

31 May 2011

IARC CLASSIFIES RADIOFREQUENCY ELECTROMAGNETIC FIELDS AS POSSIBLY CARCINOGENIC TO HUMANS

Lyon, France, May 31, 2011 -- The WHO/International Agency for Research on Cancer (IARC) has classified radiofrequency electromagnetic fields as [possibly carcinogenic to humans \(Group 2B\)](#), based on an increased risk for [glioma](#), a malignant type of brain cancer¹, associated with wireless phone use.

Background

Over the last few years, there has been mounting concern about the possibility of adverse health effects resulting from exposure to radiofrequency electromagnetic fields, such as those emitted by wireless communication devices. The number of mobile phone subscriptions is estimated at [5 billion globally](#).

From [May 24–31 2011, a Working Group of 31 scientists from 14 countries has been meeting at IARC in Lyon, France, to assess the potential carcinogenic hazards from exposure to radiofrequency electromagnetic fields](#). These assessments will be published as Volume 102 of the IARC *Monographs*, which will be the fifth volume in this series to focus on physical agents, after [Volume 55](#) (Solar Radiation), [Volume 75](#) and [Volume 78](#) on ionizing radiation (X-rays, gamma-rays, neutrons, radio-nuclides), and [Volume 80 on non-ionizing radiation \(extremely low-frequency electromagnetic fields\)](#).

The IARC Monograph Working Group discussed the possibility that these exposures might induce long-term health effects, in particular an increased risk for cancer. This has relevance for public health, particularly for users of mobile phones, as the number of users is large and growing, particularly among young adults and children.

The IARC Monograph Working Group discussed and evaluated the available literature on the following exposure categories involving radiofrequency electromagnetic fields:

- occupational exposures to radar and to microwaves;
- environmental exposures associated with transmission of signals for radio, television and wireless telecommunication; and
- personal exposures associated with the use of wireless telephones.

International experts shared the complex task of tackling the [exposure data, the studies of cancer in humans](#), the [studies of cancer in experimental animals](#), and the [mechanistic and other relevant data](#).

¹ [237 913 new cases of brain cancers](#) (all types combined) occurred around the world in 2008 (gliomas represent 2/3 of these). Source: [Globocan 2008](#)

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Results

The evidence was reviewed critically, and overall evaluated as being *limited*² among users of wireless telephones for glioma and acoustic neuroma, and *inadequate*³ to draw conclusions for other types of cancers. The evidence from the occupational and environmental exposures mentioned above was similarly judged inadequate. The Working Group did not quantitate the risk; however, one study of past cell phone use (up to the year 2004), showed a 40% increased risk for gliomas in the highest category of heavy users (reported average: 30 minutes per day over a 10-year period).

Conclusions

Dr Jonathan Samet (University of Southern California, USA), overall Chairman of the Working Group, indicated that "the evidence, while still accumulating, is strong enough to support a conclusion and the [2B classification](#). The conclusion means that there could be some risk, and therefore we need to keep a close watch for a link between cell phones and cancer risk."

"Given the potential consequences for public health of this classification and findings," said IARC Director Christopher Wild, "it is important that additional research be conducted into the long-term, heavy use of mobile phones. Pending the availability of such information, it is important to take pragmatic measures to reduce exposure such as hands-free devices or texting."

The Working Group considered hundreds of scientific articles; the complete list will be published in the Monograph. It is noteworthy to mention that several recent in-press scientific articles⁴ resulting from the [Interphone study](#) were made available to the working group shortly before it was due to convene, reflecting their acceptance for publication at that time, and were included in the evaluation.

A concise report summarizing the main conclusions of the IARC Working Group and the evaluations of the carcinogenic hazard from radiofrequency electromagnetic fields (including the use of mobile telephones) will be published in [The Lancet Oncology in its July 1 issue, and in a few days online](#).

² **'Limited evidence of carcinogenicity'**: A positive association has been observed between exposure to the agent and cancer for which a causal interpretation is considered by the Working Group to be credible, but chance, bias or confounding could not be ruled out with reasonable confidence.

³ **'Inadequate evidence of carcinogenicity'**: The available studies are of insufficient quality, consistency or statistical power to permit a conclusion regarding the presence or absence of a causal association between exposure and cancer, or no data on cancer in humans are available.

⁴ a. 'Acoustic neuroma risk in relation to mobile telephone use: results of the INTERPHONE international case-control study' (the Interphone Study Group, in *Cancer Epidemiology*, *in press*)

b. 'Estimation of RF energy absorbed in the brain from mobile phones in the Interphone study' (Cardis et al., *Occupational and Environmental Medicine*, *in press*)

c. 'Risk of brain tumours in relation to estimated RF dose from mobile phones – results from five Interphone countries' (Cardis et al., *Occupational and Environmental Medicine*, *in press*)

d. '[Location of Gliomas in Relation to Mobile Telephone Use: A Case-Case and Case-Specular Analysis](#)' (American Journal of Epidemiology, May 24, 2011. [Epub ahead of print].

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For more information, please contact

[Dr Kurt Straif, IARC Monographs Section](#), at +33 472 738 511, or straif@iarc.fr; [Dr Robert Baan, IARC Monographs Section](#), at +33 472 738 659, or baan@iarc.fr; or [Nicolas Gaudin, IARC Communications Group](#), at com@iarc.fr (+33 472 738 478)

Link to the **audio file** posted shortly after the briefing:

http://terrance.who.int/mediacentre/audio/press_briefings/

About IARC

The International Agency for Research on Cancer (IARC) is part of the [World Health Organization](#). Its mission is to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control. The Agency is involved in both [epidemiological and laboratory research](#) and disseminates scientific information through [publications, meetings, courses, and fellowships](#).

If you wish your name to be removed from our press release e-mailing list, please write to com@iarc.fr.

Nicolas Gaudin, Ph.D.

Head, [IARC Communications](#)

[International Agency for Research on Cancer](#)

World Health Organization

150, cours Albert-Thomas

69008 Lyon

France

Email com@iarc.fr

<http://www.iarc.fr/>

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ABOUT THE IARC MONOGRAPHS

What are the IARC Monographs?

The IARC Monographs identify environmental factors that can increase the risk of human cancer. These include chemicals, complex mixtures, occupational exposures, physical and biological agents, and lifestyle factors. National health agencies use this information as scientific support for their actions to prevent exposure to potential carcinogens. Interdisciplinary working groups of expert scientists review the published studies and evaluate the weight of the evidence that an agent can increase the risk of cancer. The principles, procedures, and scientific criteria that guide the evaluations are described in the Preamble to the IARC Monographs.

Since 1971, more than 900 agents have been evaluated, of which approximately 400 have been identified as **carcinogenic or potentially carcinogenic** to humans.

Definitions

Group 1: The agent is carcinogenic to humans.

This category is used when there is *sufficient evidence of carcinogenicity* in humans. Exceptionally, an agent may be placed in this category when evidence of carcinogenicity in humans is less than *sufficient* but there is *sufficient evidence of carcinogenicity* in experimental animals and strong evidence in exposed humans that the agent acts through a relevant mechanism of carcinogenicity.

Group 2.

This category includes agents for which, at one extreme, the degree of evidence of carcinogenicity in humans is almost *sufficient*, as well as those for which, at the other extreme, there are no human data but for which there is evidence of carcinogenicity in experimental animals. Agents are assigned to either Group 2A (*probably carcinogenic to humans*) or Group 2B (*possibly carcinogenic to humans*) on the basis of epidemiological and experimental evidence of carcinogenicity and mechanistic and other relevant data. The terms *probably carcinogenic* and *possibly carcinogenic* have no quantitative significance and are used simply as descriptors of different levels of evidence of human carcinogenicity, with *probably carcinogenic* signifying a higher level of evidence than *possibly carcinogenic*.

Group 2A: The agent is probably carcinogenic to humans.

This category is used when there is *limited evidence of carcinogenicity* in humans and *sufficient evidence of carcinogenicity* in experimental animals. In some cases, an agent may be classified in this category when there is *inadequate evidence of carcinogenicity* in humans and *sufficient evidence of carcinogenicity* in experimental animals and strong evidence that the carcinogenesis is mediated by a mechanism that also operates in humans. Exceptionally, an agent may be classified in this category solely on the basis of *limited evidence of carcinogenicity* in humans. An agent may be assigned to this category if it clearly belongs, based on mechanistic considerations, to a class of agents for which one or more members have been classified in Group 1 or Group 2A.

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Group 2B: The agent is *possibly carcinogenic to humans*.

This category is used for agents for which there is *limited evidence of carcinogenicity* in humans and less than *sufficient evidence of carcinogenicity* in experimental animals. It may also be used when there is *inadequate evidence of carcinogenicity* in humans but there is *sufficient evidence of carcinogenicity* in experimental animals. In some instances, an agent for which there is *inadequate evidence of carcinogenicity* in humans and less than *sufficient evidence of carcinogenicity* in experimental animals together with supporting evidence from mechanistic and other relevant data may be placed in this group. An agent may be classified in this category solely on the basis of strong evidence from mechanistic and other relevant data.

Group 3: The agent is *not classifiable as to its carcinogenicity to humans*.

This category is used most commonly for agents for which the evidence of carcinogenicity is *inadequate* in humans and *inadequate* or *limited* in experimental animals.

Exceptionally, agents for which the evidence of carcinogenicity is *inadequate* in humans but *sufficient* in experimental animals may be placed in this category when there is strong evidence that the mechanism of carcinogenicity in experimental animals does not operate in humans.

Agents that do not fall into any other group are also placed in this category.

An evaluation in Group 3 is not a determination of non-carcinogenicity or overall safety. It often means that further research is needed, especially when exposures are widespread or the cancer data are consistent with differing interpretations.

Group 4: The agent is *probably not carcinogenic to humans*.

This category is used for agents for which there is *evidence suggesting lack of carcinogenicity* in humans and in experimental animals. In some instances, agents for which there is *inadequate evidence of carcinogenicity* in humans but *evidence suggesting lack of carcinogenicity* in experimental animals, consistently and strongly supported by a broad range of mechanistic and other relevant data, may be classified in this group.

Definitions of evidence, as used in IARC Monographs for studies in humans

The evidence relevant to carcinogenicity from studies in humans is classified into one of the following categories:

Sufficient evidence of carcinogenicity: The Working Group considers that a causal relationship has been established between exposure to the agent and human cancer. That is, a positive relationship has been observed between the exposure and cancer in studies in which chance, bias and confounding could be ruled out with reasonable confidence. A statement that there is *sufficient evidence* is followed by a separate sentence that identifies the target organ(s) or tissue(s) where an increased risk of cancer was observed in humans. Identification of a specific target organ or tissue does not preclude the possibility that the agent may cause cancer at other sites.

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Limited evidence of carcinogenicity: A positive association has been observed between exposure to the agent and cancer for which a causal interpretation is considered by the Working Group to be credible, but chance, bias or confounding could not be ruled out with reasonable confidence.

Inadequate evidence of carcinogenicity: The available studies are of insufficient quality, consistency or statistical power to permit a conclusion regarding the presence or absence of a causal association between exposure and cancer, or no data on cancer in humans are available.

Evidence suggesting lack of carcinogenicity: There are several adequate studies covering the full range of levels of exposure that humans are known to encounter, which are mutually consistent in not showing a positive association between exposure to the agent and any studied cancer at any observed level of exposure. The results from these studies alone or combined should have narrow confidence intervals with an upper limit close to the null value (e.g. a relative risk of 1.0). Bias and confounding should be ruled out with reasonable confidence, and the studies should have an adequate length of follow-up. A conclusion of *evidence suggesting lack of carcinogenicity* is inevitably limited to the cancer sites, conditions and levels of exposure, and length of observation covered by the available studies. In addition, the possibility of a very small risk at the levels of exposure studied can never be excluded.

In some instances, the above categories may be used to classify the degree of evidence related to carcinogenicity in specific organs or tissues.