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Lines and Horses**

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Thread Tools

[Show Printable Version](#) [Email this Page](#) [Subscribe to this Thread](#) Jan. 8, 2012, 10:52 AM #1

**alterhorse**

Advanced  
Join Date

Nov. 29, 2008

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Posts

1,867

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## High Tension Power Lines and Horses

I don't have any particular reason for posting this. A thread in Horse Care about a horse that runs made me wonder if horses could ever be bothered by being kept near High Tension Power Lines.

I know that when I've hiked, and the trail crosses under high voltage lines, I could both hear and feel the hum and it made me feel uncomfortable.

Seeing that horses can be so sensitive I'm just wondering if anyone has had any experiences that made them feel that power lines may somehow effect horses.

Thoughts?

---

Reply With Quote

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Jan. 8, 2012, 11:03 AM#2

**Ponies, etc.**

Training Level

Join Date

Dec. 5, 2011

Posts

74

---

Weird that you mention this, we took my daughter's very bombproof pony trail riding yesterday, and she refused to cross under the power line on the trail. We thought there must have been something she could sense that we couldn't.

---

Reply With Quote

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Jan. 8, 2012, 11:13 AM#3

---

**jenct**

◦ Training Level

Join Date

Feb. 6, 2011

Posts

82

---

 We had a very quiet horse that we moved to a barn that had high tension power lines on the property. That mare was not the same horse there at all. Normally pretty bombproof, she would spook at anything and everything that was seen or unseen. We moved her out 6 months later to a different barn. She never spooked again. We got our old horse back. Maybe it was just a coincidence, but I do believe it could have been the power lines.

---

↳ Reply With Quote

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Jan. 8, 2012, 11:15 AM#4

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**MahNavu**

◦ Banned

Join Date

Jul. 24, 2011

Posts

440

---

 thank you for this thread! As you can see from this photo:

<http://i990.photobucket.com/albums/af30/mazinn/003.jpg>

we have lines running very close to our horse's lower pasture. They are not IN the pasture, but close enough to it that while we humans cannot hear the hum from the pasture, I am fairly certain the horses can...

Our OTTB gets these running fits....once in a while, they seem very extreme, BEYOND his

normal running jags... with full out galloping, and he looks wild eyed and panicky.....we were trying to figure out what could be causing these panic fits.....IF that is indeed what they are...or if they are just him feelling good...or maybe, both. maybe some are just him living it up ....but sometimes....he seems different....spooked beyond coherent thought.

never considered the wires!

\*slaps self upside head\*

I am anxiously awaiting any responses on this subject.....

---

↳ Reply With Quote

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Jan. 8, 2012, 11:41 AM#5

---

**Guilherme**

◊ Schoolmaster

Join Date

Aug. 25, 2007

Posts

6,448

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Serendipity is great!!!!

Just under an hour ago this was discussed on NPR's "On Your Health" with Dr. Zorba Paster. The "bottom line" is that there is no credible, scientific evidence that high tension power lines cause any problems with human health.

How about equine health or behavior?

I've had a TVA line over my place for the entire 17 years I've lived here. I have never, as in **NEVER**, had any horse react negatively to the line's presence (health-wise or behavior-wise). We have had, at any given time, 40+ head on board. Many of our trails follow the line's access road. I'm not saying it can't happen, only that in the equivalent of 680+ equine years I've *never* seen it. ☺

G.

---

✶ Reply With Quote

---

Jan. 8, 2012, 11:50 AM#6

---

**enjoytheride**

◦ Schoolmaster



Join Date

Jun. 1, 2002

Location

Indiana

Posts

9,678

---

My barn boards under power lines and nextto a power substation. The horses also occasionally run like lunatics. Then again, they are arabians.

---

✶ Reply With Quote

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Jan. 8, 2012, 11:58 AM#7

---

**alterhorse**

◦ Advanced

**Original Poster**

Join Date

Nov. 29, 2008

Posts

1,867

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Originally Posted by **Guilherme**

*Serendipity is great!!!!*

*Just under an hour ago this was discussed on NPR's "On Your Health" with Dr. Zorba Paster. The "bottom line" is that there is no credible, scientific evidence that high tension power lines cause any problems with human health.*

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*I've had a TVA line over my place for the entire 17 years I've lived here. I have never, as in **NEVER**, had any horse react negatively to the line's presence (health-wise or behavior-wise). We have had, at any given time, 40+ head on board. Many of our trails follow the line's access road. I'm not saying it can't happen, only that in the equivalent of 680+ equine years I've never seen it. ☺*

G.

Thanks G!

To keep this investigation comprehensive, what types of horses do you primarily keep? Quarter Horse type breeds, or do you keep many Thoroughbreds?

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Reply With Quote

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Jan. 8, 2012, 12:18 PM#8

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**HorsingRound**

Working Hunter

Join Date

Aug. 18, 2010

Location

Southern California

Posts

155

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Originally Posted by **Guilherme**

Serendipity is great!!!!

Just under an hour ago this was discussed on NPR's "On Your Health" with Dr. Zorba Paster. The "bottom line" is that there is no credible, scientific evidence that high tension power lines cause any problems with human health.

This is not the definitive end to this discussion.

I worked at a lawfirm with an attorney who was doing research on this issue and what he found out was that the electromagnetic field around power lines may trap/attract naturally occuring radon, thus causing spikes in cancer around the high tension power lines (not unlike basements trapping radon in homes). He was working for insurance companies that were looking to avoid any liability related to cancer and powerlines. When I was shopping for my place, I asked him his opinion on this issue and he said that while the science is still not clear on the issue, he recommended that I NOT buy a place within 1/2 mile of any high power lines. I upped that to a mile.

Friends of mine have places right next to gobs of high tension power lines (500kV lines) that meet in a hub in Acton, CA. They have a story about one of their horses spooking and bolting when what seemed like a lightening strike, but was probably static electricity, "hit" a silver concho on a saddle as they rode beneath power lines on a clear sunny day.

Sometimes as I ride beneath the 550kV lines, the hair on my arms stands up from the static electricity. Is this good for you or your horse? Don't know, but I'm glad I don't live anywhere near these lines--it was worth the extra money I paid to not live near them, 'cause, don't I know, those places under the power lines are Super Cheap out where I live.

---

Reply With Quote

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Jan. 8, 2012, 12:24 PM#9

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**Guilherme**

Schoolmaster

Join Date

Aug. 25, 2007

Posts

6,448

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Over the years we've had Walkers, Rackers, QHs, MangalargaMarchadors, and crosses of the above. We also had one or more ASBs, TBs, WBs, drafts, etc. Also crosses of the forgoing.

Dr. Zorba noted that there are several groups that deeply believe that the science is wrong. Attorneys are one of those groups. 🤔

The hard truth is that lawyers have a deep financial interest in finding problems. To protect and expand this interest they find experts that think like they do. The "expert opinion" section of the ATLA Journal (a/k/a *The Whorehouse*) is full of them. 🤔

I'm satisfied that the science is sound and the fears unjustified. As with all things, YMMV.

G.

Member, State Bar of Texas (Retired)

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👤 Reply With Quote

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Jan. 8, 2012, 12:32 PM#10

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**HorsingRound**

👤 Working Hunter

Join Date

Aug. 18, 2010

Location

Southern California

Posts

155

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👤 Originally Posted by **Guilherme**

*Over the years we've had  
Dr. Zorba noted that there are several groups that deeply believe that the science is wrong. Attorneys are one of those groups. 🤔*

*The hard truth is that lawyers have a deep financial interest in finding problems. To protect and expand this interest they find experts that think like they do. The "expert opinion" section of the ATLA Journal (a/k/a *The Whorehouse*) is full of them. 🤔*

You completely missed my point regarding the attorneys I worked for. The lawfirm I worked at was an *insurance defense* firm, and defended insurance companies against the "ambulance chasers." In order to mount a credible defense, it was in their best interest to

know both sides of the powerline argument.

It was one of these attorneys, defending insurance companies against powerline claims, who--confidentially--gave me the advice to not buy near powerlines.

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↳ Reply With Quote

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Jan. 8, 2012, 01:05 PM#11

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**Bluey**

◦ Schoolmaster **Premium Member**

Join Date

Jan. 4, 2007

Location

TX

Posts

30,485

---

You should not buy land around lines because it will be harder to sell to those that don't like them, not because the lines being around any place are harmful. 😊

We have several lines thru here.

We bred TBs and AQHA race horses for decades.

No one ever had any problem that could remotely be associated with any lines they may have grazed under.

Not saying some other place they may have or not, but here, those lines are harmless.

Now, one time there was a short on one such line at my neighbor's place, the gate was a bit electrified from it and he was shocked mightily when he touched it.

He called the company, they came, fixed the short, grounded it properly and no one again had any problem.

The only real problem with any overhead electric lines of any kind here is that, if they are knocked down for any reason, they may cause prairie fires and those here can burn hundred's of thousands of acres before they can be stopped. 😊

There is always some disadvantage to anything we may do, nothing is going to be 100% good and safe but rarely, that's life.

---

Reply With Quote

---

Jan. 8, 2012, 01:07 PM#12

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**alterhorse**

Advanced

**Original Poster**

Join Date

Nov. 29, 2008

Posts

1,867

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Originally Posted by **Guilherme**

*Over the years we've had Walkers, Rackers, QHs, MangalargaMarchadors, and crosses of the above. We also had one or more ASBs, TBs, WBs, drafts, etc. Also crosses of the forgoing.*

*Dr. Zorba noted that there are several groups that deeply believe that the science is wrong. Attorneys are one of those groups. ☹*

*The hard truth is that lawyers have a deep financial interest in finding problems. To protect and expand this interest they find experts that think like they do. The "expert opinion" section of the ATLA Journal (a/k/a The Whorehouse) is full of them. ☹*

*I'm satisfied that the science is sound and the fears unjustified. As with all things, YMMV.*

G.

*Member, State Bar of Texas (Retired)*

So, to keep it relevant to the "theory" that the "noise" from a "power line" might cause an overly sensitive type thoroughbred to become agitated, or frightened enough to become spooky and run around like a nut, lets disregard the unknown about power lines, and only focus on the known....

Fact: Power lines can make noise.

Info we need:

\*Do power lines ever make noises other than humming? If so under what circumstances?

\*Do power lines make more noise depending on how much current is being drawn through them?

Fact: Certain horses can become agitated, or frightened by certain noises.

Info we need:

\*Opinions from others who think their horses had changes in behavior when ever they were near power lines.

\*Stories about horses that were spooky under situations of ongoing environmental noises (power line or other), and how their behaviors improved when either the noise was stopped, or the horse was moved to a different location.

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Maybe some horses are less spooky in ear plugs because of noises that the horse can hear, but the owners are not aware of?

Some horses are better in an indoor ring with ear plugs. Could it possibly be because of the humming sounds made by some arena lights?

Certainly many things are in the realm of possibility. But it's likelihood of it that we are seeking to discover.

---

1 members found this post helpful.

 Reply With Quote

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Jan. 8, 2012, 01:16 PM#13

**alterhorse**

 Advanced

**Original Poster**

Join Date

Nov. 29, 2008

Posts

1,867



Originally Posted by **Bluey**

*You should not buy land around lines because it will be harder to sell to those that don't like them, not because the lines being around any place are harmful.*

*We have several lines thru here.  
We bred TBs and AQHA race horses for decades.  
No one ever had any problem that could remotely be associated with any lines they may have grazed under.*

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*Now, one time there was a short on one such line at my neighbor's place, the gate was a bit electrified from it and he was shocked mightily when he touched it.  
He called the company, they came, fixed the short, grounded it properly and no one again had any problem.*

*The only real problem with any overhead electric lines of any kind here is that, if they are knocked down for any reason, they may cause prairie fires and those here can burn hundred's of thousands of acres before they can be stopped.*

*There is always some disadvantage to anything we may do, nothing is going to be 100% good and safe but rarely, that's life.*

Thanks Bluey! That helps to further make the case for the lines being unlikely to cause spooking.

But if a horse is born and raised under the lines one might expect that they'd acclimate to any sounds from the lines.

How many horses did you bring in that had no previous power line exposure? Many or few?

Was there audible power line noise at your farm that people could hear?

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Reply With Quote

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Jan. 8, 2012, 01:26 PM#14

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**Guilherme**

Schoolmaster

Join Date

Aug. 25, 2007

Posts

6,448

When doing any sort of research you should look at both sides (at least) of an issue. At the end of the day, however, there is no *evidence* that power lines cause any harm to the life forms around them.

Nor is there any *evidence* that they cause behavioral changes.

That doesn't necessarily mean that there are not adverse *economic* consequences because of the "reasoned/unreasoned fear factor." Back in the '70s there was a big scare about leaking radiation from police radar guns. Cops would rest them in their laps in the patrol cars, causing a fear of testicular cancer. I'd flown the Grumman S2E aircraft and we had a pretty honking big radar on that airplane. I remembered some Navy publications on radar safety and recommended them to an attorney defending one case in Milwaukee Co. He won and thanked me for the info. But that didn't stop the cases from being brought.

The science, IMO, is very clear. The economics are less so.

G.

Reply With Quote

Jan. 8, 2012, 01:33 PM#15

**alterhorse**

Advanced

**Original Poster**

Join Date

Nov. 29, 2008

Posts

1,867

Originally Posted by **Guilherme**

*When doing any sort of research you should look at both sides (at least) of an issue. At the end of the day, however, there is no evidence that power lines cause any harm to the life forms around them.*

Nor is there any evidence that they cause behavioral changes.

That doesn't necessarily mean that there are not adverse economic consequences because of the "reasoned/unreasoned fear factor." Back in the '70s there was a big scare about leaking radiation from police radar guns. Cops would rest them in their laps in the patrol cars, causing a fear of testicular cancer. I'd flown the Grumman S2E aircraft and we had a pretty honking big radar on that airplane. I remembered some Navy publications on radar safety and recommended them to an attorney defending one case in Milwaukee Co. He won and thanked me for the info. But that didn't stop the cases from being brought.

The science, IMO, is very clear. The economics are less so.

G.

That's why I think we should only focus on the likelihood of the noise from a power line causing a horse to spook.

I have personally heard a hum while hiking under power lines, so were not guessing about the noise factor. 😊

---

↳ Reply With Quote

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Jan. 8, 2012, 01:34 PM#16

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**MahNavu**

⊘ Banned

Join Date

Jul. 24, 2011

Posts

440



we can hear ours humming loudly when we go to the pond, or if we are in the back corner of the lower pasture, closest to the lines.....

i am sure the horses can also

anyone know if these towers have lightning rods or anything? what would happen if one got hit? would it explode, send showers of sparks, catch on fire...or what?

See video i shot in the summer....which had me wondering...

at 1:16 seconds, i really thought that was going to be the end of that tower....

<http://www.youtube.com/watch?v=80saXmSZCS0>

---

↳ Reply With Quote

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Jan. 8, 2012, 01:55 PM#17

**RaeHughes**

◦ Working Hunter

Join Date

Jan. 2, 2012

Location

Wairarapa New Zealand

Posts

163

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Hi - agreed that there is **no** credible correlation between "electro-magnetic radiation" and power-lines (the EMR is actually a misnomer - as power lines dont radiate EM but are more like the ripples in a pool after you throw a stone in).

ALBEIT, your horses are able to pick up when the earthing (grounding in US) is not as good as it can be. This is because they are stepping across two potentials and a small current is flowing. Not enough to shock but enough to tingle them like an electric fence on trickle. Humans standing in the same place would not get anywhere the same amount of current flowing as we can not span the same two potentials - ours are much closer and the potential difference is much lower so a lot less current is able to flow.

when you can hear the hum/crackle - especially on wet/misty days - this is most probably what you are experiencing. Particularly common after sustained periods of drought when acceptable earth/ground levels are compromised.

And as to whether electricity line supports (towers above) have lightning "rods" (arrestors) all depends on the earthing systems being used. There are a wide variety of solutions for earthing with the obvious aim to **not** have them catch on fire or otherwise fail catastrophically. Aerial earths are common on long extra high voltage lines (>110kV) where spans are long. These take the hit rather than the power line itself. It will then go to "ground" at the nearest point that is grounded. It is best practice, internationally, that every metal support (eg lattice tower, steel pole) is earthed/grounded to a resistance less than a nominal amount. This ensures a very direct path to earth/ground to minimise the time that fault currents flow (one type of protection system is designed to see current going to earth

and take the circuit off-line).

(Sorry for the lecture - I am an electrical engineer with >20 years in electricity lines companies most of which has been to do with earthing of power systems 😊. This is a common question that I have been asked.)

---

👤 Reply With Quote

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Jan. 8, 2012, 02:20 PM#18

---

**Guilherme**

👤 Schoolmaster

Join Date

---

Aug. 25, 2007

Posts

---

6,448

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Thank you for the information on "earthing." 😊

I agree that there is sometimes "noise." I've never had the noise adversely affect any horse I was riding or observing. That's not only been my experience where I live but in other places where I've ridden.

Put another way, it's a non-issue.

G.

---

👤 Reply With Quote

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Jan. 8, 2012, 02:38 PM#19

---

**Bluey**

Ⓞ Schoolmaster **Premium Member**

Join Date

Jan. 4, 2007

Location

TX

Posts

30,485

Being by the lines was never an issue for our horses, if raised here or brought in as broodmares or horses in training.

Our entrance cattleguard is right under one line.

We have to get out to open the metal gate, drive thru and close it.

No one has ever been shocked there at all.

Some days you hear the hum as you open the gate, but you have to be right under them to hear them at all.

The poles have lightning arrestors every so often, I think half a mile, because we are at the end of the line and have miles of lines.

Every pole is individually grounded also.

The lines here are most checked monthly with a helicopter and every two months inspected from the ground.

🗨️ Reply With Quote

Jan. 8, 2012, 03:54 PM#20

**Lynnwood**

Ⓞ Grand Prix

Join Date

Dec. 19, 2005

Location

Some where in the middle of nowhere.

Posts

2,785

Have taught and boarded at a farm that had them running through one pasture and very close to the rest of the barn/ring. You 100% could and did get shocked through the gates in the right conditions especially when it was wet out or humid.

The horses were more nervous and skittish then at other places more wary of the gates.

The end all form me was standing holding on to the wood fence and being able to feel a low current running through it.

Can't be healthy in any way for man or beast.

Just as an aside the owner of the neighboring farm also exposed has recently been diagnosed with a very rare form of leukemia no known cancer runs in her family. .. could it be long term exposure to the power lines .. "shrug"?

"I would not beleive her if her tongue came notorized"

"I also trap them in a **Have-a-Heart** and shoot through the bars." 🌐

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👤 Reply With Quote

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Racing

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Equestrians with Disabilities

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## Childhood leukaemia risk doubles within 100 metres of high voltage power lines

Main Category: Cancer / Oncology  
Article Date: 15 Sep 2004 - 9:00 PDT

 email to a friend  printer friendly  opinions

<a href="http://ad.doubleclick.net/jump/ehsne.pro.mnt.medicalnewstoday/;iprof=md;ims1=o25;vp=t;sz=300x250;ord=123456789?" target=" blank" ></a>

Current ratings for:  
Childhood leukaemia risk doubles within 100 metres of high voltage power lines

**Patient / Public:**  
**Healthcare Prof:**  
Article opinions:



4.09 (47 votes)  
3.68 (19 votes)

The biggest ever publicly funded UK study (1) into power lines and child cancer has found that children under the age of 15 living within 100 metres of high-voltage power lines have close to twice the risk of developing leukaemia. Children aged 0-5 are the most vulnerable so their risk is likely to be even higher.

This result from the OXFORD CHILDHOOD CANCER RESEARCH GROUP study, headed by Gerald Draper analysed and compared 33 years of data (from 1962 to 1995) on 35,000 children diagnosed with cancer, with their distance to the nearest electricity transmission line. These latest findings from the Draper study of a direct effect on childhood leukaemia from U.K. power lines follow from the acknowledged International studies that the risk of childhood leukaemia is doubled for magnetic field exposures above 0.4 microtesla, well below that seen under high voltage powerlines.

We have learned that " preliminary results" of the latest Draper study, funded to run from 1997-2001 were known as long as 3 years ago and were formally shown confidentially to the U.K. Department of Health in May 2003, but to date has not as yet been entrusted to the public.

We of the Trentham Environmental Action Campaign, an independent research and activist group, concerned about adverse health effects from power-lines, believe it to be absolutely scandalous that 3 years after telling the Department of Health of these latest U.K. findings, it is only as a consequence of our intervention that we are now able to make these findings public.

There appears to have been a determination to withhold the Draper Report for as long as possible.

Trentham has a high voltage powerline crossing many of the houses and there are a significant number of households with young children within 100 metres of the line. Our concerns are also shared by REVOLT, Powerwatch and Electromagnetic Hazard and Therapy, organisations which have also voiced concerns about the health risks of electromagnetic fields for many years.

Our campaign group has been in constant contact with the Government, Mr George Hooker at the Department of Health and the National Radiological Protection Board [NRPB]. We have also been deeply disappointed in the organisations' continuing denial of the problem despite their knowing about these new study results. The NRPB already acknowledges that there is international consensus on the fact that the incidence of childhood leukaemia is doubled at a magnetic field of 0.4 microtesla, which is exceeded under most powerlines. In March 2004, the NRPB reduced the national magnetic field exposure guidelines from 1,600 microtesla to 100 microtesla [3].

They said "In the light of these findings (the association between exposure to magnetic fields and childhood leukaemia) and the requirement for additional research, the need for further precautionary measures should be considered by government". However, 100 microtesla is still 250 times higher than the level (0.4 microtesla) at which the risk of developing childhood leukaemia is doubled.

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**Free Arc Flash Handbook** - 130 pages of free expert advice on Arc Flash and Arc Flash safety - [www.Duralabel.com](http://www.Duralabel.com)

**Treat Prostate Cancer** - Learn About a Treatment Option for Metastatic Prostate Cancer. - [learn-about-prostate-cancer.com](http://learn-about-prostate-cancer.com)

Electromagnetic fields from powerlines are also linked to adult cancers, depression and suicide. Our Trentham group carried out a local survey which produced extremely worrying results. Depression, miscarriages, headaches, insomnia (with its attendant chronic health problems due to immune system damage) were much more common in the people who lived near the powerline, compared with those who lived further away. Some of these health problems were also found in the important California Health Department report [4] of 2002.

The leukaemia link has now been repeatedly demonstrated. The government should take our nation's health seriously enough to stop allowing houses to be built near high-voltage lines and to remove overhead powerlines from residential areas.

The Minister for Housing and Planning, Keith Hill, in a letter dated July 2004, said "We are aware that there is continuing debate about the effect of living under power lines and whether this can have adverse long-term health effects.

We are of the opinion that power lines are unlikely to have significant effects on the environment". Is this a government statement about people's health or about the environment? Is this confusion, or

spin?

It is time the government and planners took the health issue seriously, and reversed their policy of favouring developers, clearly ignoring the risk to children's health. New housing near powerlines should be restricted, and existing lines through residential areas phased out.

Only 50 years ago developing childhood leukaemia was an almost certain death sentence. Due to dramatic improvements in treatment, about 80% of children who suffer from the most common form of childhood leukaemia (ALL, acute lymphoblastic leukaemia) now live for more than 5 years after treatment, but childhood leukaemia remains the largest child killer disease. Survivors often suffer ongoing adverse health complications. The number of children developing leukaemia has been steadily growing over the last 50 years. In 2001, Dr Sam Milham reported [5] a link between the growth in electricity supply and the growth in leukaemia incidence in the USA.

We ignore this at our peril.

[1] Draper G, Vincent T, Kroll M & Swanson J - Childhood cancer and electromagnetic field exposures from powerlines - Department of Health funded 1997-2001, RRX 46 (as yet still unpublished)

[2] International Scientific Conference on the incidence, causal mechanisms and prevention of childhood leukaemia and other cancers. Westminster, 6-10th September 2004. See: <http://www.leukaemiaconference.org>

[3] See: <http://www.nrpb.org> for details of their announcements and downloadable publications

[4] Neutra R R, DelPizzo V & Lee G M - An Evaluation of the possible risks from electric and magnetic fields (EMFs) from power lines, internal wiring, electrical occupations & appliances, 2002, California Department of Health & Human Services, The Program, Oakland, California. <http://www.dhs.ca.gov/ehib/emf/RiskEvaluation/riskeval.html>  
See commentary  
on: <http://www.electric-fields.bris.ac.uk>

[5] Milham S & Ossiander E M - Historical evidence that residential electrification caused the emergence of the childhood leukaemia peak Medical Hypotheses, 2001, 56(3) 290-295

Further information about powerlines and health problems (including the Trentham survey) can be found on the following websites

TEAC <http://www.revolt.co.uk/trentham> Media (only) Tel: 01782 658648 Mobile 07963915428 (Maureen A)

EMH&T <http://www.em-hazard-therapy.com> Simon Best 01730 816 799 (media only)

Powerwatch <http://www.powerwatch.org.uk/contents.asp>

REVOLT <http://www.revolt.co.uk>

This press release has been issued by the Trentham Environmental Action Campaign  
51 Earlsbrook Drive, Trentham, Stoke on Trent ST4 8DL  
email [maureen@revolt.co.uk](mailto:maureen@revolt.co.uk)

• Additional

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• Citations

Article adapted by Medical News Today from original press release.  
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**Visitor Opinions (latest shown first)**

**Open minded rigorous skeptic**

*posted by BGriffin on 10 May 2012 at 6:21 pm*

Here is a link to map of the strength of the earth's natural magnetic field...

[http://en.wikipedia.org/w/index.php?title=File:WMM2010\\_F\\_MERC.pdf&page=1](http://en.wikipedia.org/w/index.php?title=File:WMM2010_F_MERC.pdf&page=1)

The map shows a range of values from 20,000 nano-Tesla to 60,000 nano-Tesla. 1000 nano-Tesla = 1 micro-Tesla. So the earth's natural background magnetic field ranges from 20 to 60 micro-Tesla depending on where you are.

Claiming that being exposed to a 0.4 micro-Tesla fields doubles a child's risk for developing leukemia is absurd. How would this have been tested? With no person having experienced less than 20 micro-Tesla, there is no possible control group with which to compare.

Additionally the EM fields encountered from utilizing things like hair driers and toaster ovens will be far greater than from overhead high voltage lines since the intensity of a field decreases with the square of the distance... something 500 times more distant will be 250,000 times less intense.

[| post followup](#) | [alert a moderator](#) |

### help as i am the one who live under cell tower

*posted by ngemasithembiso on 29 Apr 2012 at 4:42 am*

can you please help me me and my family we are living under the cellphone tower and now my mother is sick and i do not know what are the causes of the deases. she has moving in and out from the doctors, and my aunt is also having an eyes problem as well as my father so for me what can i do. to prove whether the deases are caused by living under the tower or are just deseas as usual. please help me. thank you.

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### Children Live Under Powerlines

*posted by Susan on 22 Aug 2011 at 8:40 am*

I wanted to tell you that my daughter and grandchildren live under huge powerlines. My grandson is 10 and he can stand outside under the lines with a flourescent light bulb in his hands and it lights up. You can touch him and feel the power running through him. He can not feel it. So tell me, are my children and grandchildren at risk for cancer because of this?

[| post followup](#) | [alert a moderator](#) |

### Health Danger From High Power Electric Transmission Lines

*posted by Anon on 11 Apr 2009 at 6:58 pm*

While traveling in Ireland on March 18, 2009, a Sky News television station reported that studies showed that children who lived near transmission lines had a 500% increased risk of cancer as adults. Can you confirm this source? Or give me any printed information indicating the accuracy of this report?

A high powered transmission line is being proposed to cross my property.

Please give me any info on your research regarding the health risks involved.  
Thank you so much.

[| post followup](#) | [alert a moderator](#) |

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### 'Childhood leukaemia risk doubles within 100 metres of high voltage power lines'

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# Citizens Energy Task Force

... for a sustainable energy future

## DAVID CARPENTER: HIGH-VOLTAGE POWER LINES POSE HEALTH RISKS

*Posted on* | February 16, 2010 |

Dr. David O. Carpenter, a public health physician trained at Harvard Medical School and Director of the Institute for Health and the Environment at the University at Albany, State University of New York, points out research indicating that the CapX2020 power lines will increase the risk of leukemia, Alzheimer's, brain cancer, and more, for those living near the power lines. You may remember Dr. Carpenter's in-depth testimony on the neurological effects of EMF, or his peer-reviewed report on the effect of EMF on humans and animals.

He wrote the following for the Winona Daily News.

I'm writing to share knowledge accumulated through decades of studying the health effects of high-voltage power lines, such as the CapX2020 power line proposed to come through southeast Minnesota.

As a medical doctor and Director of the Institute for Health and the Environment at University at Albany, SUNY, I believe that the health risks posed by long-term exposure to magnetic fields are serious, especially to children and fetuses.

There is definitive scientific evidence that exposure to magnetic fields from power lines greater than 4 milligauss (a level significantly less than what is expected to occur near this proposed power line) is associated with an elevated risk of childhood leukemia. Some scientific research indicates an elevated risk at levels of 2 milligauss. A home not near a power line will usually have a level of less than 1 milligauss.

Scientific evidence also links magnetic field exposure to cancer in adults as well, particularly leukemia and brain cancer. There is strong evidence that lifetime exposure to magnetic fields above 2 milligauss is associated with an increased risk of neurodegenerative diseases in adults, including Alzheimer's disease and Lou Gehrig's disease.

With many aspects of human toxicology, there is uncertainty as to which mechanisms may be responsible for increased human disease with exposure to power line magnetic fields. However, there is a large body of evidence showing ways in which magnetic fields, including the frequencies from power lines, affect tissue at a cellular level.

Some people may be unusually sensitive to exposure to magnetic fields. A recent study demonstrated that children living within 100 meters of a power line who lacked a gene to repair DNA had a 400 percent greater chance of developing leukemia than other children with a similar exposure

Based on this scientific information, I would make these public health recommendations:

Information should be publicly available regarding the calculated magnetic field strength from a power line at various distances.

In many locations along the route, magnetic fields from the CapX2020 power lines will exceed levels that create health risks, particularly over time as more electric power is used.

High-voltage power lines should be routed to prevent power line magnetic fields in homes from exceeding 4 milligauss. Every effort should also be made to avoid long-term exposure to magnetic fields above 2 milligauss.

Public health precaution also suggests that high-voltage lines be located as far as possible from homes, schools, playgrounds and child-care facilities. In areas of dense population where routing away from homes and other sensitive uses is not possible, power lines should be placed underground in such a way as to reduce human health impacts.

The letter at the Winona Daily News is [here](#). If you are affected by this, or concerned, follow that link and register your comment.

**Category:**Uncategorized

## Comments

### 2 RESPONSES TO "DAVID CARPENTER: HIGH-VOLTAGE POWER LINES POSE HEALTH RISKS"

1. **kingililand**

*April 27th, 2010 @ 4:17 pm*

How do I determine the risks of the overhead lines where I live?

2. **Phyllis Smits**

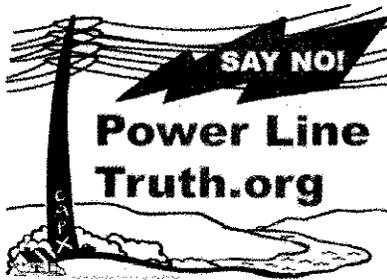
*May 14th, 2010 @ 12:53 pm*

Since moving to our home June of 2009 my 2 1/2 grandson started having seizures, he resides with us in our home. His first seizure he had a high fever but last week he had three seizures with just a low grade fever. Also my 17 and 14 year old sons have constant headaches and all the children and myself have had flu like symptoms almost continually. running along side of our home in fact all the way up our street are those big cement power lines. The one on the edge of our property has a transformer thing on it. Could this all be due to the power lines. I'm going to call the electric company and see if I can get information on how much power goes through these lines.

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•ABOUT

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The Citizens Energy Task Force (CETF) is a coalition of neighbors and citizens concerned about the proposed CapX2020 high voltage transmission lines in Minnesota and Wisconsin. As a legally registered "intervening party" in the CapX2020 permitting process, we represent the concerns of citizens who question the need for these particular high voltage power lines, and who support clean, sustainable, locally-generated power sources.

# **THE IMPACT OF EMF ON THE CARDIOVASCULAR FUNCTION: BASIC METHODOLOGICAL PROBLEMS AND STUDY RESULTS**

AlicjaBortkiewicz, ElzbietaGadzicka, MarekZmyslony, WieslawSzymczak

Nofer Institute of Occupational Medicine, 91-348 Lodz, 8 Teresy St., Poland, e-mail: alab@bg.p.lodz.pl

## **INTRODUCTION**

The electromagnetic fields are commonly present both in the communal and work environments. The potential hazard they may pose to human health is a matter of dispute among scientists. The external electric and magnetic fields have a theoretical potential to affect the functions of different body systems through generating electric impulses within them. Most sensitive to EMF influence are the cardiovascular and nervous systems, particularly the autonomic nervous system responsible, among others, for neurovegetative regulation of the cardiovascular function. The experimental studies conducted thus far indicate that EMF within radio-, microwave and power frequencies can produce measurable biological effects. However, there is no simple relation between the biological and health effects. The biological effects detected at the cell or tissue level may not, and most often do not, translate into overt health effects, owing to the adaptation and repair mechanisms of the living organisms. Moreover, the findings of experimental animal studies can hardly be extrapolated to humans in view of the anatomic and functional differences between species.

Therefore, for evaluating health effects of EMF exposure, the most significant are experimental, clinical or epidemiological studies on humans. The experimental studies make it possible to assess immediate response but not the delayed effects. Consequently, they are of little use for the assessment of effects of occupational exposure that may last several years. Much more valuable are the clinical studies. However, these have been rather scarce so far. Although there are quite a few reports on such studies conducted in the former Soviet Union, they have been commonly criticized for several methodological drawbacks and deficiencies, including ad hoc selection of the study population, lack of control group, lack of accurate assessment of electromagnetic environment, and lack of adjustment for the confounding factors [1]. Further, the methods applied may not have been relevant to the study objectives. To assess the cardiovascular function, the authors most frequently used resting ECG and office BP measurements which are inadequate for detecting functional impairments or early subclinical signs of cardiac dysfunction.

Epidemiological studies can provide the best evidence on the possible health effects of EMF exposure. The studies performed thus far were intended mostly for the assessment of cancer risk from EMF exposure. The results of the first epidemiological study concerning the cardiovascular system were published in 1999. Savitz et al. [2] examined the mortality from cardiovascular diseases in relation to occupational exposure to 50 Hz EMF in a cohort of 138 903 male electric utility workers from five US companies over the period of 1950-88. Age-, race-, and social class-adjusted long-lasting exposure to high level EMF was associated with an increased risk of death from arrhythmia-related conditions: (n=212) SMR=1.11-2.04 and acute myocardial infarction: (n=4238) SMR=1.07-1.66. These data suggest a possible association between occupational EMF exposure and arrhythmia-related heart disease.

Few epidemiological studies on non-carcinogenic effects of radio frequency and microwave EMF exposures have been published. It was only the questionnaire studies on subjective complaints among mobile phone users and physiotherapists [3-5].

Since 1993, in Nofer Institute of Occupational Medicine, has been conducting comprehensive studies on the neurovegetative regulation of the cardiovascular function in workers exposed to different frequency EMFs [6-9]. The aim of these studies is to investigate the influence of EMF exposure on the cardiac function and find out whether and to what extent the EMF frequency and exposure level can determine the type of cardiovascular abnormalities and neurovegetative function affected.

## **METHODS**

For the study, the non-invasive methods of 24-h ECG (Holter) and blood pressure (ABP) monitoring have been applied which are useful for the examinations of healthy individuals during their normal professional and daily activities. These methods are helpful in detecting not only the clinical manifestations of the disease, but also in early diagnostics of a dysfunction of the cardiovascular system. The examinations were carried out in compliance with the standards of the International Society for Holter and Noninvasive Electrocardiology [10]. The protocol was approved by the Regional Biomedical Ethics Committee.

In all workers the following examination were performed:

- ☉ *anamnesis*, with an interview on the risk factors of cardiovascular diseases: family history of metabolic and cardiovascular diseases, lifestyle, nutritional habits and physical activity,

- ⊗ *routine physical examination*, with office blood pressure measurement (according to WHO guidelines),
- ⊗ *routine ECG* during rest in the supine position, using Medea system (Gliwice, Poland) from 12 typical leads. The results obtained were evaluated based on generally adopted standards,
- ⊗ *24 h ECG monitoring* on normal workday, using MedilogSuprima (Oxford, England) set from three bipolar leads. This method is thought to ensure the most accurate diagnostics of cardiac rhythm disturbances, conduction impairments and ischemia, especially silent ischemia. Final results, including heart rate, symptoms of ischemia, arrhythmia and conduction disturbances were related to the international standards for Holter ECG [10],
- ⊗ *Blood pressure monitoring (ABP)* 24-h ambulatory blood pressure monitoring (ABP) was performed during everyday professional and other activities using DX-Medilog Systems. The measurements were carried out automatically, every half hour during daily activities and every hour during sleep. Mean, systolic (BPS) and diastolic (BPD) blood pressure and heart rate (HR) for 24 hours (O), day-time activity (D) and night-time rest (N) were calculated and related to the Staessen's standards of arterial blood pressure as the reference values [11]. The day-night ratios were determined for systolic and diastolic blood pressure (BPSD/BPSN, BPDD/BPDN). Subjects with BP ratio lower than 1.1 are called the 'non-deepers' (subjects without a physiological nocturnal decrease in systolic and/or diastolic blood pressure).

To assess the worker's individual exposure to EMF, the following parameters were measured:

- ⊗ in workers at substations: maximum value of electric field strength ( $E_{max}$ ), maximum value of magnetic flux density ( $B_{max}$ ) and doses per workshift -  $E_{Dose}$  and  $B_{Dose}$ ,
- ⊗ in workers at AM broadcasting stations and radioservices: maximum value of electric field strength ( $E_{max}$ ) and dose per workshift -  $E_{Dose}$ ,
- ⊗ in workers at broadcasting stations: maximum value electric field strength ( $E_{max}$ ), mean value of E ( $E_{mean}$ ) and lifetime dose of E ( $E_{dose}$ ) separately for VHF, UHF and VHF+UHF. Our assessment of exposure was based on the spectrum analysis of a typical station broadcasting in UHF and VHF bands and on the specifications of the apparatus installed there.

For electric and electromagnetic fields measurement, the HOLADAY Ind. (USA) measuring set and MEH-1a meter (Technical University, Wroclaw, Poland) were applied. Lifetime dose was calculated for each worker from the history of employment and job timetable.

## SUBJECTS

The groups under study consisted of technical personnel and security service workers who were qualified by the occupational health practitioners as capable for work at permissible EMF levels. The subjects were randomly selected from the total number of such stations in Poland. All workers at each appointed station were examined. All subjects from the exposed and control groups gave their formal consent prior to inclusion in the study. Before the onset of the examinations, all the procedures were explained in detail to each participant.

The examinations were carried out in:

- ⊗ AM broadcasting stations - exposed group I. The AM stations selected for the study operate at frequencies ranging from 738 kHz to 1503 kHz. These objects can be characterized by permanent exposure of their workers to electromagnetic fields (mostly electric). The main source of EM fields in the AM stations are the transmitting antennas (half-wave dipole), radio transmitters and feeders (which conduct radio signals from the transmitter to the antenna),
- ⊗ Radioservices - exposed group II. Mobile radio-communication network requires permanent technical supervision by radioservice units. During the service operations, undesirable EM fields are generated by unscreened transmitters, improper tuning instruments and transmitting-receiving antennas installed in the service-rooms. The radioservice workers under study were exposed to EM fields with frequency varying from 150 to 170 MHz,
- ⊗ Substations - exposed group III. Substations are the element of a power system, in which electric power is distributed and/or transformed. The substations under study work at high and extra high voltage (110 kV- 400 kV). The substation equipment is a source of 50 Hz electric and magnetic field,
- ⊗ Broadcasting stations that operate at frequencies ranging from 66 MHz to 727 MHz - exposed group IV,
- ⊗ Radio Link Stations - the control group (0). Radio Link Stations are the elements of a telecommunication system in which signals are transmitted using EM waves focused into very row beams by directional (mostly parabolic) antennas. As the antennas are installed in highly inaccessible locations and the radiation beams run high above the ground, the workers of the Radio Link Stations are free from being exposed.

The exposed groups were similar with respect to the level of physical fitness, and dietary and smoking habits. They differed only with regard to the age. The possible influence of this difference on the study results was eliminated using statistical methods.

	groups			Control group	
	AM Broadcasting Stations (I)	Radioservices (II)	Substations (III)	Broadcasting stations (IV)	Radio Link Stations (0)
Number of subjects	71	40	63	71	42
Age (years)	46.9±13.1*	36.9±11.5	39.0±10.0	45.3±9.4	40.7±2.2
Employment (years)	18.6±12.1	12.5±9.5	15.0±10.0	19.1±8.8	17±13
Diseases diagnosed:	12 (17%)	6 (15%)	11 (17%)	11 (15%)	8 (19%)
hypertension	1	0	0	1	1
diabetes, type II	31 (44%)	26 (65%)	30 (46%)	36 (51%)	15 (29%)
Subjective symptoms					
Body mass index (BMI)	26.0±3.0	25.0±3.0	26.0±4.0	26.9±3.8	25.4±4.0
No. of smokers (more than 10 cigarettes a day)	33 (47%)*	15 (37.5%)	21 (33%)	17 (24%)	17 (40%)

BMI (body mass index) = body mass/height<sup>2</sup> (kg/m<sup>2</sup>)

\* statistically significant difference (p≤0.05)

## RESULTS

Groups	AM Broadcast Stations (I)	Radio-services (II)	Substations (III)	Non-exposed Broadcasting stations (IV)	Radio Link Stations (0)
EMF frequency	738-1503 kHz	150-170 MHz	50 Hz	66-727 MHz	0
E <sub>max</sub>	50-550 [V/m]	2-55 [V/m]	4.3-6.7 [kV/m]	7.9-16.7 [V/m]	0
B <sub>max</sub>	negligible	negligible	26.1-37.3 [mT]	negligible	0
E <sub>dose</sub>	50-260 [(V/m)h]	irregular exposure	0.2-15.2 [(kV/m)h]	50-260 [(V/m)h]	0
B <sub>dose</sub>	negligible	negligible	1.4-38.9 [mTh]	negligible	0

In all the exposed groups, the assessment of EMF exposure revealed levels not higher than those attributed to the hazard area (exposure indicators lower than 1).

Percentage of subjects with ECG and blood pressure abnormalities	A: resting ECG	B: Holter monitoring	A and/or B	ABP	Office BP
Groups					
AM broadcasting stations (I)	34	56	83	6	20
Radioservices (II)	30	32.5	55	20	22.5
Substations (III)	29	40	48	38	19
Broadcasting stations (IV)	34	44	59	70	34
Radio Link Stations (0)	26	31	40	23	19
p	ns	I vs. 0 (p=0.02)	I vs. 0 (p=0.001)	III vs. 0, IV vs. 0 (p=0.04)	ns

In the exposed groups an increased frequency of cardiovascular abnormalities and impaired neurovegetative regulation of the cardiac function was found (table 3).

The risk analysis revealed that the probability (odds ratio) of abnormalities in resting and/or 24h ECG was 6.6 for group I, 2.0 for group II, 1.4 for group III and 4.5 for group IV, as compared with the control group. On the other hand, the ABP monitoring revealed that when compared to the values found for controls, the risk of elevated

blood pressure was lower in group I, comparable in group II, and significantly higher in group III. The increased BP values referred mainly to systolic pressure at night (odds ratio=12.5). In group IV, the risk of elevated arterial blood pressure was 8.6. The disturbances in ECG and blood pressure regulation were dependent on EMF exposure level. In group I, a significant relationship was found between mean BPSN and  $E_{dose}$  ( $p=0.004$ ) as well as between BPSN and  $E_{max}$  ( $p=0.03$ ). In group II, the relationship between BP level and exposure parameters was not analysed. Such an analysis could not be performed due to the specific job characteristics in this group - the workers were periodically exposed to EMF emitted by the repaired equipment and it was impossible to determine the level of their exposure. In group III, BP disturbances significantly correlated with exposure parameters. BPDO, BPDD, and BPDN were found to depend on the period of employment ( $p=0.023$ ,  $p=0.05$ ,  $p=0.001$  respectively). A significant correlation was found between BPSN and BPDN and the maximum values of electric and magnetic fields ( $p=0.043$  and  $p=0.026$ ). In group IV, the disturbances in blood pressure regulation were dependent on EMF exposure parameters. The risk of BP changes increased with higher lifetime dose in the UHF-VHF bands (OR=2.3) as well as higher  $E_{mean}$  in the UHF and VHF bands (OR=2.3, OR=2.5, respectively). The risk of impaired BP regulation (no nocturnal blood pressure drop) significantly increased with lifetime dose in the UHF range (OR=2.6) and with a growing  $E_{mean}$  in the VHF range (OR=2.1).

## DISCUSSION AND CONCLUSIONS

Although the occupational exposure limits, as laid down in respective Polish regulations, were not exceeded, the different impairments in circulatory system were observed in exposed workers. In workers at AM broadcasting stations, heart rhythm disturbances, detected by 24-h ECG monitoring, were more frequent than in the non-exposed workers as well as workers exposed to 50 Hz EMF. On the other hand, in workers at substations and broadcasting stations, an increased frequency of elevated BP (detected with ABP) was found, compared with other groups. Our results suggest that the frequency of EMF determines the type of the observed cardiovascular disturbances. Significant BP disturbances occurred mainly at night; therefore, the office BP measurement is inadequate to detect them. It is also worth noting that in EMF-exposed workers, increased BP levels in ABP could be found both in the persons showing normal and increased BP values in a single office measurement. Therefore, the present scope of prophylactic examinations seems to be inadequate for workers occupationally exposed to EMF and it should be extended with 24h monitoring of the ECG and blood pressure.

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Phone Health

## Electromagnetic Field (EMF) Radiation and Your Eye by Taraka Serrano

Do you use cell phones and computers for extended periods of time? Here are a few things you should know about electromagnetic field (EMF) radiation and how it can affect your eyes:

\* In 2001, German scientists found a link between cell phone radiation and eye cancer. The study investigated a form of eye cancer called uveal melanoma, in which tumours form in the layer that makes up the iris and base of the retina. The research suggests there is a threefold increase in eye cancers among people who regularly use the devices. (["Scientists Link Eye Cancer to Mobile Phones"](#))

\* According to public health scientist Dr. George Carlo, in 2006 there were 500,000 cases of brain tumors and eye melanoma diagnosed worldwide due to cell phone usage. In 2010, that number will be an unprecedented 500,000. ([Dr. Carlo's interviews.](#))

\* A group of Israeli researchers found a link between microwave radiation and the development of cataracts. The study shows that prolonged exposure to radiation similar to that used by cellular phones can lead to both macroscopic damage to the lens and that at least part of this damage seems to be permanent and does not seem to heal. (["Cell Phone Radiation May Cause Vision Problems"](#))

\* Ophthalmologic symptoms of electrosensitivity and electromagnetic hypersensitivity include pain or burning in the eyes, pressure in/behind the eyes, dry eyes, floaters, cataracts. It is hypothesized that the watery contents of the eye absorb the radiation.

### FOUR THINGS YOU CAN DO

1. Minimize use of cell phones, as well as computers and other electronic devices. While there is no practical or convenient solution, but avoidance is always the primary goal.

2. Eyeglass frames should ideally be made from plastic with no wire. Metal frames can serve as an antenna to focus the radio and cellular phone radiation on the brain and eyes. ([Dr. Mercola](#))

3. Take anti-oxidants, particularly SOD, catalase, glutathione, and CoQ10. Radiation has been shown to decrease levels of these anti-oxidants. Supplements you may need are:

- *Melatonin*: a powerful anti-oxidant noted to prevent DNA breaks and is effective in preventing kidney damage from cell phones
- *Zinc*: protects the eye from oxidative damage and helps preserve antioxidants in the blood;
- *Gingko Biloba*: an herb considered a powerful anti-oxidant which helps protect against damage in the brain, eye and kidney. Also helps support the production of glutathione.

and glutathione;

- *Bilberry extract*: preserves vision and reduces oxidative damage to  
Goldberg)

4. Use scientifically validated EMF protection devices. Most recom types that effectively reduce the effects of EMF radiation on your bi your first line of defense against stress. EMF radiation is known to c stress on your body and weaken your immune system. The right pr strengthens your biofield against this disruption and maintains its de balance.

*(Note: This article is shared for educational purposes only and does advice. If you believe that you have a health problem, see your doci immediately.)*

© 2006 Taraka Serrano

Taraka Serrano is a writer and health advocate. Watch video report phone and EMF radiation, and learn more about the right electroma protection for you. Visit EMF-Health.com .

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## Eye Problems - Poor Vision

### Causes of Poor Vision

The eye works in a manner similar to a camera where the lens bends rays of light to focus them on the retina at the back of the eye just as the lens in a camera focuses the light on the film. The concept of light being focussed and thrown onto the back of the eye (the retina) is referred to as refraction, hence the term you will see often is 'refractive error'.

### Refractive Errors

Refractive errors are a normal physiological variation in the focusing power of the eye. Many people have minor refractive errors which do not interfere with their vision and they do not need glasses.

### Short Sightedness (MYOPIA)

Short sightedness or myopia is the most common refractive error. Patients with this condition cannot see in the distance but can focus on objects at a short distance, hence the term short sighted.

### Long Sightedness (HYPERMETROPIA)

Long sighted or hypermetropic patients usually have good distance vision when young but as they become older they experience increasing difficulty both with distance and near vision. Once they can no longer see to read they have the condition known as presbyopia, where the eye loses the ability to change focus to see close objects resulting in the need for reading glasses.

### Astigmatism

Astigmatism is where there is a difference in the focal power between the horizontal and the vertical planes of the eyes focusing system. Astigmatism can be either or long sighted or short sighted and it causes blurring both in the distance and

### Laser Eye Surgery

Laser eye surgery has been called the miracle solution to myopia, has many hidden dangers, including the possibility that it may make your eyesight worse.

Types of Laser Treatment for Short sightedness:

1. PRK or Photoreactive Keratectomy - laser energy is applied to the surface of cornea.
2. LASIK - this is the newer laser in situ keratomileusis.

Watch video and see how it's done.

### Lasik for the Eyes! Are you Afraid?

In one study of 10 patients (14 eyes) with moderate to high myopia, LASIK patients experienced reduced contrast sensitivity for up to one month after surgery. This gradually corrected itself over the next two months (J Cataract Refract Surg, 1998; 24: 183-9).

### Poor results

Although many doctors play down the adverse effects, research shows that not all patients feel happy with the results. In another research, an estimated 10-20 per cent of patients experienced regression and so requested repeat surgery, often misleadingly referred to as an "enhancement procedure" (Ophthalmol, 1998; 105: 131-41).

To combat this problem, they inexplicably offer this solution: perform a deliberate over correction of around 50 per cent, involving a

when focusing on close objects. An eye with an astigmatism is shaped more like a rugby football than a soccer ball which is round and which does not have any astigmatism.

Cataract  
Glaucoma  
Macular Degeneration  
Diabetic Eye Disease  
Pterygium

### **Eye Strain and Stress**

Aside from those mentioned above, the role of environment is also important. Study also shows that increased prevalence of myopia among children and young people is related to the stress, physiological and psychological, placed on them by the educational system. Long hours of close work force the eye to strain unnaturally when focusing on objects farther away (Tidsskr Nor Laegeforen, 1991; 73: 3635-7; Gig Sanit, 1996; 24: 19-22).

A Japanese study discovered that there was also a strong relationship between failing eyesight and the sitting posture of young students during study. It concluded that myopia is strongly associated with shortness of viewing distance and increased neck flexion (Nippon, GankaGakkaiZasshi, 1997; 101: 393-9). This data is of course relevant for adults who work or study in similarly unfavorable conditions.

What has received less research attention is the subject of electromagnetic fields (EMFs) and eye damage. Ann Silk is a retired optician and member of the Royal Society of Medicine. For the last 10 years she has made a special study of the effects of EMFs on eye function, and she has recently published her findings in a two part series in the Journal of Electromagnetic Hazard and Therapy (1998, 8: 10-11 and 9: 8-9).

### **Eye Strain and Stress**

deeper cut into the eye. But, over correction, whether deliberate or accidental, is a huge risk since it can leave you far sighted instead of near sighted. Once this happens, all you can do is return to your glasses. Laser surgery could not correct farsightedness no matter what the cause is.

It's been observed that corneal haze and night halos were the most common side effects. While the haze appeared to clear up over the first year, night halos remained a problem throughout the study period.

Another common adverse effect of laser surgery is what are called "central islands". These are under corrected zones in the center of the treated cornea, which are occasionally the reason for double vision, halos and reduced visual acuity.

Finally, laser surgery will not stop the eye's ageing process. As people age and the lens loses its ability to change shape and focus, many become farsighted. This may mean that even with laser surgery, by your mid 40s or 50s you may be back to wearing glasses again this time to improve your far sightedness.

### **Safe Remedies to Improve Vision**

#### **See Better Without Glasses**

Wearing eyeglasses and contacts can be uncomfortable. If you've been using them for a while and think you'll never be able to do without them, this could be the most eye-opening article you'll ever read.

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### **Electromagnetic Field (EMF)**

Not given much attention is the subject of electromagnetic fields (EMFs) and eye damage. Ann Silk is a retired optician and member of the Royal Society of Medicine. For the last 10 years she has made a special study of the effects of EMFs on eye function, and she has recently published her findings in a two part series in the Journal of Electromagnetic Hazard and Therapy (1998, 8: 10-11 and 9: 8-9).

Ms Silk has confirmed through her research that electromagnetic field can cause eye damage both directly and indirectly. For example, low level microwaves, like those found in everyday communications equipment, have been shown to cause direct damage to the retina, iris and macula. She also reported that dopamine loss, which can be triggered by external electrical fields, can lead to blurred vision. Dopamine is a hormone necessary for the development and maintenance of the health of the eye.

Reduced night vision comes with age.  
"Reduced night vision, or night myopia,

can have a nutritional cause, usually a zinc deficiency. But it can also be caused by sitting in a magnetic field all day," according to Silk.

Research into indirect damage has proven more difficult to obtain. But some researchers in Japan have recently investigated the growth of both E coli and Bacillus subtilis in a stronger than normal magnetic field. Their findings indicated that not only was cell growth greater, but also the death rate of bacterial cells was inhibited. Research at UCLA in California has also shown that fungi proliferate in electromagnetic fields.

Perhaps the point is to address the underlying causes of eye problems, such as nutrition, before leaping to cover up the symptoms.

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