

Hans,

I am glad to hear that you are doing well. I am all for walking barefoot on the beach, but I do not recommend grounding the human body in an electrified world. In building biology, we focus on eliminating or drastically reducing the human-made electromagnetic fields first.

Here is an article on the different ways of how electric fields can be measured and how an earthing pad can actually increase a person's AC electric field exposure.

http://www.buildingbiology.ca/pdf/ACHTUNG_ABSCHIRMDECKE.pdf

I find it quite amazing that the authors of the paper you mention in your e-mail read the above article as well and completely dismissed its findings. They state: "A problem with their experiment was that they placed the Earthing pad beneath the mattress, so there was no direct conductive contact between the Earthing system and the skin of the subject. Thus, the experiment and conclusions were not valid."

Obviously, they are not too familiar with the testing protocols of either testing method. In science, for any proper testing method the conditions are defined under which a given method is used to generate meaningful and reproducible results.

For body voltage testing, the testing protocol of the Building Biology Evaluation Guidelines SBM-2008 specifies that the person to be tested must be electrically isolated and that the person should not be close to a grounded or earthed surfaces (e.g. earthing sheet).

SBM-2008 testing protocol (in German only)

<http://www.baubiologie.de/downloads/manuskripte/randbedingungen2010.PDF>

The reasoning behind this is that body voltage testing shows the potential difference (never the electric field strength!) between the potential of the human body and the potential of the Earth. You do not have to be a rocket scientist to understand that when you "earth" the human body to be tested that it will have the potential of the Earth, which is why in this case the body voltage reading indicating a potential difference will always be close to zero. No surprise there. This reading, however, does not tell you anything about the actual electric field exposure. Therefore, the VDB Guidelines (<http://www.baubiologie.net/verband/richtlinien/> in German only; VDB = German Association of Building Biology Professionals) state: "It is incorrect to use body voltage testing as the SOLE testing method with which to assess an exposure situation."

The Earthing Institute seems to be the only entity on earth that requires a test person to be "earthed" during body voltage testing. In this case, the body voltage testing does not tell you anything about the electric field exposures in the given space, it only tells you with its zero reading that the electrical connection between the naked human body and the Earth is well established.

If you wish to determine the electric field strength in a given space, the electric field probe is placed at least 5 cm away from any conductive material, be it the earthing sheet or the human body to avoid false readings due to the proximity effect. If the mattress were removed and the naked body in direct contact with the earthing sheet, the electric field strength readings would simply be higher if the electric field source were above the earthing sheet because with this direct earthing connection the human body will be even better at attracting electric field lines.

Even though the paper claims that earthing would "decrease one's exposure to these potentially disruptive fields," the article by Virnich clearly shows that in some cases the exposure can be increased by earthing. And if you remove the mattress between earthing sheet and human body, the increase will be even higher. The example of earthing a sheet next to a plugged-in, but turned-off bedside lamp claims that a "680-fold decrease" of alternating electric field exposure was achieved. Nothing could be further from the truth. If the authors would bother to take a proper electric field reading, they would have seen a major increase.

I hope this helps.

Best regards,
Katharina

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