

Solutions for Low-EMF Computing

One of the most common questions I receive from people who have become electrically sensitive is “How can I use a computer without increasing my symptoms?”

Some people experience headaches, brain fog, burning skin, chest pain, heart arrhythmia or other [EHS symptoms](#) when using a computer. Whether you already experience symptoms or simply want to use a computer in a healthier way, there are a number of practical things you can do to lower your EMF exposure.

Using a computer has often been a struggle for me since becoming electrically sensitive four years ago. I can have periods of high sensitivity that last for weeks or months. During these times, being on a computer just 30 minutes a day can be a challenge for me.

However, through this process I have learned a lot about what works, and what does not when it comes to using a computer safely. My hope is that you can implement some of the solutions below to get back online or to simply prevent you and your family from experiencing the negative effects of EMFs.

Here are ten of my top low-EMF computing solutions:

1.) Utilize the basic steps for safe computing. These are steps that you can use – even if you are not electrically sensitive. Read [this article](#) to learn a few quick modifications to your computer setup.

2.) Heightened EMF sensitivity may come and go. As I mention above, I have had times when I could not tolerate using a computer. These times can be very discouraging. However, after some time, my symptoms would lessen and I could get back on the same machine that previously gave me intense headaches and/or heart palpitations. Overexposure will lead to downtime. Learn to pace yourself. You may be able to do 20 minutes per day and then work up to a couple hours or more per day. When you start to get a tension headache or that buzzing feeling in the head, back away and take a break for an hour or so. Taking a shower, running cold water on your hands and face or going for a walk in nature will help reduce the symptoms.

3.) Try an electronic keyboard. During times when your symptoms are intense, there are still ways to be productive. I typed this article on my AlphaSmart 3000. It is a battery powered electronic keyboard (with almost no EMFs!) that will allow you to type up to 100 pages that you can easily import into a computer. It’s amazing how productive and creative you can be without the distraction of the internet right in front of you! Many writers use these for their first drafts. Most of the material on this website was written on my AlphaSmart 3000 (pictured below). I recommend that you purchase the AlphaSmart Neo, which is a newer model than the 3000 that I have (Note: Get the Neo, rather than the Neo2). You can find a high quality [model on ebay for about \\$50](#). It is one of my favorite low EMF computing purchases and it will last you for years.



Your office can be anywhere with an AlphaSmart!

4.) Use your smart phone for communicating. This may sound antithetical to some, but hear me out. I have multiple EHS friends who have figured out that the least painful way for them to be connected to the world is through their smart phone. With the phone on Airplane mode, it is actually a *very low EMF computer*. You can type responses to your messages and then press "send" while the phone is on Airplane mode. The messages will be stored by the phone. Then, put the phone down on a table, turn off Airplane mode and walk away from the phone. Within a couple minutes, the phone will have sent all stored messages and downloaded any new messages.

Other than a couple seconds of exposure after turning off Airplane mode (you could also have your spouse or a friend do this), this method is nearly EMF free and is a good option for those who need to stay connected for work or family reasons. The phone need not be off of Airplane mode more than 5 minutes a day, depending on how many times you need to check and send messages. Note that this method works for text messages, WhatsApp and most web based email like Gmail or Yahoo. It does not work for certain apps like Facebook Messenger or Google Hangout. This method works incredibly well for those who are too sensitized to EMFs to safely be on a computer. See #9 below for another tip on using a phone.

5.) Not all computers are created equal. The severity of your symptoms may depend upon which computer you are using. I find that older systems with less processing power are easier to use without EHS symptoms. There is something about the newer, more powerful computer processors (especially solid state hard drives) that give me a headache and chest pain very quickly.

I have purposely tested many computers the past few years to see what works and what does not. The following is what I have found to work for me. **Please note:** We are all different and an electronic device that works for me may not work for you. However, in speaking to others who have experimented with various computer models and brands, the following is generally true for many people who are EHS.

Low(er) EMF laptop computers (*current suggestions March 2019*):

- [Toshiba Satellite Laptop](#) (Purchased 2015 & 2018 - exact model number is C55-B5299). This computer has minimal computing power, but works great for internet and word processing use. It is one of the few new computers I have tested where my headaches are manageable (likely due to the lower processing power). The faster model (4 gig of Ram) is [model number C55-B5298](#) is also a low-EMF laptop that works well for me. You will have to shop around to find an available unit to purchase (they sometimes come up on ebay, Walmart or Amazon).
- [Dell Latitude E6230](#) (Purchased multiple models 2016 & 2018) - This small laptop computer has excellent computing power/speed, but is also very quiet and gives me minimal symptoms if I use it for 1-2 hours at a time. You will have to shop around to find an available one to purchase (typically ebay, Walmart or Amazon).
- [Toshiba Satellite Laptop](#) (Purchased 2017) - Model number L755-S5365 from 2012. I recently purchased this laptop via ebay on the recommendation of another ES person. So far so good with this laptop. My colleague swapped out some of the hardware and software in this laptop to make it very quiet (processing speed of less than 1 GHz).
- [Dell Latitude E6510 Laptop](#) (Purchased 2012) – An excellent computer with ample processing power that is very quiet and causes minimal symptoms for me.
- Dell Inspiron M5010 Laptop (Purchased 2010) – Another low-EMF computer that I have used for years (pictured above). However, it may be hard to find a good used model online.
- Many desktop computers (or laptops connected to a docking station) with separate monitors can also work well (Dell monitors from 2010-2011 work best for me). You can also use a [screen magnifier](#) so that you can sit farther back from the monitors. Desktop systems provide the ability to modify your work station in a way that lowers your EMF exposure (like moving the computer and screen farther away from your body).

The following are computers that I have reacted to very quickly (usually headaches and pressure in the chest within 10-20 minutes). I returned these computers and moved on.

- MacBook Air Laptop (Purchased and returned 2012)
- MacBook Laptop (Used 2013)
- iMac Desktop (Used 2014)
- Dell Inspiron 15 (Purchased and returned in 2014)
- Dell Inspiron 15 3000 Series (Purchased and returned 2015)
- HP Pavillion Laptop (Purchased 2013)

As a general rule, older Dell and new Toshiba laptops seem to work well for electrically sensitive people. Anything by Apple, along with HP's and the newer Dell laptops tend to be high

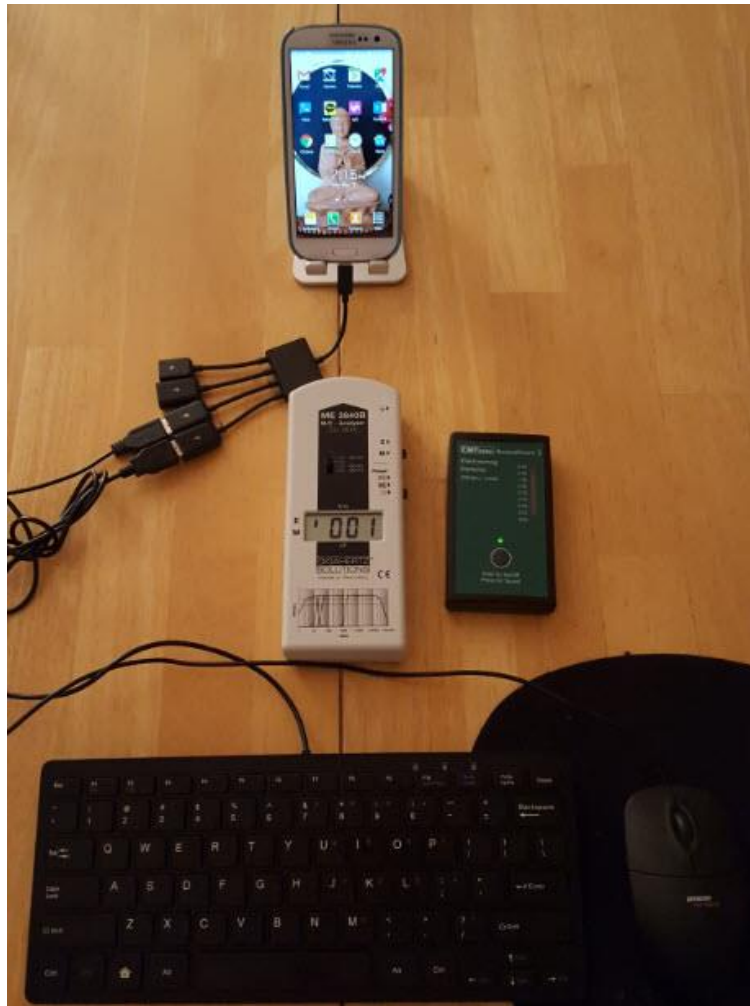
EMF machines. I have heard from many EHS people that Apple computers are the worst for them (partly due to their aluminum case - see [this video](#)). It's a shame because I really like Apple computer systems.

6.) Rotate Your Computers. If you happen to have a couple different computers (possibly one old computer and one new), it helps to limit the amount of time you spend on any one of them. I find that if I start reacting to one computer, it is best to not use it for a day or two. I usually cycle between 2-3 different laptops listed above, as well as my AlphaSmart. Every computer emits its own set of frequencies. By changing things often, it will help your body from becoming sensitized to any one computer.

7.) Work in a low EMF environment. You could have an ultra-low EMF computer, but if you are in a high EMF environment you may quickly develop symptoms. [Here is a summary](#) of how to measure and reduce the four types of EMFs in your home and/or work space. Here is [short video](#) that show you how to measure your home.

8.) Use a Low-EMI wired keyboard. Not every wired keyboard (or mouse) is low-EMF. Some will have cheap circuitry that will produce significant amounts of EMI (electromagnetic interference). This can be a problem for electrically sensitive individuals. I test my equipment with a Radio Shack AM radio model 12-467 (you can typically find one on ebay). Below is a [short video](#) where I demonstrate how you can test your keyboard. This [wired keyboard](#) has been tested to be low-EMI.

9.) Wire Your Smart Phone. An electrically sensitive colleague recently shared how she uses her smart phone for emails when she is going through a time of heightened sensitivity. Below you can see her Samsung S3 that is connected to an external keyboard and mouse. The mouse cursor actually shows up and the smart phone then acts like a small computer screen (which is better than a normal computer screen for most ES people). She is able to compose her emails and do her writing on Airplane Mode. The messages then send once the phone is reconnected to the 3G/4G network (she steps away from the phone then). The USB attachment seen below can be found [here](#). As outlined [in this article](#), it is also possible to connect most smart phones to the internet via Ethernet, which makes it possible to use your device without any wireless connectivity. This is truly a low-EMF computing solution.



10.) Build your own system. For some individuals, using a computer in a normal manner may become too difficult. The good news is that even in this scenario you can still work, be online and stay connected to the world. It will take some technical knowledge and added expense, but it is completely worth it if you need to be on a computer for your income.

The following is one such system that was designed by Bruce McCreary, a retired electrical engineer who has been electrically sensitive for nearly 30 years. It took him considerable time to design and build this system, but he now has an ultra-low EMF computer setup. His knowledge is extremely valuable and could help you if you are serious about building such a system.

This system has a specially designed keyboard and mouse that have almost no electric fields. They are connected to a computer that is in a specially shielded box that is typically in another room. For the computer screen, a small LED/DLP projector behind the rear projection screen is set to rear projection mode and projects towards the user onto the screen.

Here are some images of Bruce's computer system that he designed for his off-the-grid home in Arizona. If a system like this is of interest to you, please [contact me](#) and I will connect you either

to Bruce or another colleague, Richard Conrad, Ph.D, who also has considerable experience helping people design and build low-EMF systems.



The computer screen above is actually from a projector behind the wall.



The projector is in a shielded box and sends the images through an inverted lens.



Most of the high-EMF computing components are outside this home.

The following video was recently shared with me as well. This is what one man invented to create an ultra-low-EMF computing solution:

<https://www.youtube.com/watch?v=jT8-UOCnAnU>

Hopefully these suggestions will get you back in action and keep you healthy for years to come. If you know someone who cannot be on the computer to read this article (very common for EHS people), please print it and mail it to them.

If you have any suggestions of low EMF computers or methods that have helped you, I would appreciate hearing about them. Please share your ideas below to benefit others who are experiencing the exact same thing.