

Living well: Optimizing your nutrition & detoxifying your kitchen
Session I: Water

Olga Naidenko, PhD (00:00):

This would be a shorter section, but we can have lots of time for Q&A. I would love to introduce to everybody to this resource: EWG database? I will come back to the previous slide, but I want you to share the link. So everybody, if you want, you can write it down. You can use a search engine, ewg.org/tapwater, and I would love to tell you about the kind of resources that one can find in the database. So together with a team of EWG data analysts, toxicologists, and people who understand a lot more about database architecture than I do, we have been building this resource since 2005. The EWG tap water database compiles data on chemical contaminants, detected in the tap water all across the country in all 50 states.

Olga Naidenko, PhD (00:55):

So you can see that there is a convenient search option that will say, “find your water.” One can put in a ZIP code, and then the ZIP code will bring up the names of the community water systems where one lives. Maybe it will be that we have a whole bunch of water systems. We might not know which one it is. Then we can look at the water bureau to see with, or just look by proximity. The database is going for the different types of chemicals detected in the water and then talking about the health impacts that those chemical contaminants can cause. The good news is that the EWG does not stop there; we have lots of consumer resources. In particular, I want you to let you know about the EWG filter guide, because I would say that we as a society have not invested enough in recent years into protecting and safeguarding drinking water quality.

Olga Naidenko, PhD (02:01):

What happens is a lot of water infrastructure, which we have in place, is actually fairly old — decades old. I am based in Washington, DC, which is where EWG headquarters are. Some of the infrastructure is from the late 19th century, hence right there, right? It is slowly getting replaced, nowhere near fast enough, as it needs to be while there is environmental pollution. When we spoke about cookware, we talked about those fluorinated chemicals that have gone into the making of certain types of those non-stick pans those fluorinated chemicals are also water contaminants. So that’s why EWG recommends coming into WGS filter guide, doing one’s own research. Even a simple countertop filter, such as the ones that once sees in the picture, can already remove a whole bunch of contaminants, not all of them.

Olga Naidenko, PhD (03:00):

And very often when people start researching their drinking water quality more, they may be interested in investing in the best of what is available in their consumer product market today, which is reverse osmosis treatment systems. They are popular because they remove more contaminants, but they also have drawbacks. And the biggest drawback is that the way reverse osmosis systems work is that they basically waste a part of the water. They produce some purified water, but a whole bunch of water goes into the waste stream, and with the conditions of drought that many parts of the country are experiencing—most recently, of course, California—that aspect of reverse osmosis is not so positive. Drinking water is infinitely better than drinking soft drinks. EWG does recommend for consumers to filter their tap water upon doing research.

Olga Naidenko, PhD (04:00):

There are water systems in the countries that are really doing pretty well in terms of protecting water quality. But really, all across all across the nation, the challenge of contaminants in drinking water persists. And that's why many people who come to the EWG website say, see, see what EWG has to say about this. So, I will go to the next slide, just so everybody can see the link where one can learn to look up your water system and to learn more about water filters. And let's see what questions we get from our audience.

Jean Sachs, LBBC (04:35):

So, I guess everybody should click on that link and put their ZIP code in just to see, because we have people from all over the country. It's absolutely really smart for everybody to do that. Lynn, are there any questions?

Lynn Folkman, LBBC (04:48):

Yes. I know you had mentioned the Brita pitcher. Is that a good place to start? It can be overwhelming, I think, once you see what's actually in your water. So, I'm sure there are' different levels of where to start, but would the Brita filter be a good start for people?

Olga Naidenko, PhD (05:17):

Brita — and there are many other brands — a pitcher filter with a replaceable filter cartridge, the ones that one often sees on their countertop. Many people put that filter pitcher into their refrigerator because they prefer their water cold. It is a great place to start. Those type of filtration cartridges would remove many of the common water contaminants — in particular, water disinfection byproducts. So, important emphasis here: water disinfection is essential. Water disinfection often uses that same chlorine or varieties of chlorine as in bleach. But it's a different type of section; it's a big water plant section where the chlorine is controlled, but still toxic, and also cancer-causing disinfection byproducts do form from the use of chlorine. Chlorination or other types of disinfection is essential, as otherwise

Olga Naidenko, PhD (06:13):

we would have bacteria in our water. Not good. That's what they had in the 19th century — not good. ' A basic filter feature would do a great job in minimizing the concentration of those disinfection byproducts and also lead, Philadelphia; New York; Newark; Washington, DC. We all have problems with legacy lead pipes that our communities are struggling to find enough funds to remove. We are all trying as communities, but the lead pipes are still in many communities and that filter feature will do a good job at removing lead. Now what's really important is timely replacement of cartridges. Cartridges are not magic. Whatever is the manufacturer life on how much water passes through, after that basically the cartridge keeps on catching those contaminants. But if the cartridge is old, guess what happens: ' the other way around. The cartridge has accumulated so many contaminants. It can release some back into the water that I think I'm filtering. So, buying the filter pitcher, great first step; replacing the cartridge, according to the recommended replacement, second essential step because otherwise one might as well not bother buying the filter.

Jean Sachs, LBBC (07:26):

That's a good point. And you need reminders to do that.

Olga Naidenko, PhD (07:31):

Yes. Reminders. Put it in your phones, stick it on you in your refrigerator. Whatever works. Nowadays, some of the fancy filter pitchers come with a little light where it will blink to say “replace the cartridge.” I also do want to emphasize that we at EWG realize that for many people in the country, even that routine expense of a replacement filter cartridge may be economically too much. So, just realize that community water systems are starting to realize that there are some pilot programs around the country to provide water filters, particularly where people know that they have lead pipes, lead in their water. So, looking for resources that if one says, “You know, I cannot afford, maybe I can buy a filter pitcher, but I cannot afford to buy a cartridge every other month.” Looking for options for support. There are, of course nonprofits for support in terms of water filtration, particularly for lead, because filtering out the lead is really essential for children’s health. It’s important for us adults, too, but essential for children’s health.

Jean Sachs, LBBC (08:35):

I just want to get to some of these questions. A lot of people who buy bottled water, or they go to some places you can fill up, how can you find out if that water is safe? ‘You don’t know where it’s coming from.

Olga Naidenko, PhD (08:54):

Indeed. not-so-good news about the quality of our tap water has contributed to increasing bottled water consumption. And it’s simultaneously’ economically just tremendously disadvantageous. And indeed, people don’t know where the bottled water has come from. There have been some powerful investigations reported—it seems that the bottled water that one buys in the supermarket is just local tap water, bottled and marked up a thousand times or some such thing. That’s why economically, EWG recommends that countertop filter. It will provide quality likely equal or superior to the local bottled water in a supermarket.

Jean Sachs, LBBC (09:38):

OK. One person’s asking: If you boil your water, is that going to make a difference?

Olga Naidenko, PhD (09:45):

Well, if the local water system has issued a boil water advisory, likely because there has been a leak in the pipe and there is a risk that the distribution pipe system has had some bacteria sneak in, that water system will likely fix it. But if they issue a boil water advisory, please boil your water. That is essential. You may or may not have bacteria in your water. But that’s not boiling water is essential and may, if not save lives, prevent diarrhea. And that is good. Boiling water will not remove the contaminants, but boiling water is important when there is a notice.

Jean Sachs, LBBC (10:20):

Thank you. Lynn, do you have any other questions?

Lynn Folkman, LBBC (10:23):

Um, I know there are’ a couple of questions in regard to reverse osmosis systems. Any recommendations? People say, obviously, they’ really can be really expensive. I don’t know if there’s any recommendations for something that’s less expensive that you know of.

Olga Naidenko, PhD (10:39):

Well, I would like to share that we are seeing a lot of innovation in home water treatment systems. "This is not the format to share specific shopping recommendations because there's so much diversity, even among reverse osmosis systems. And we are seeing that there's now a price range for the reverse osmosis systems, which are not as expensive as they used to be. But one still wants to remember that it's not just the initial installation cost. The maintenance cost, that cartridge replacement, is something also not to forget. Reverse osmosis is also not magic. And then a good question to consider is: is one going to do it oneself? It is enough to change their pitcher filter, but some people are less comfortable with changing the reverse osmosis filter, unless one is more comfortable with a screwdriver, and so on. So that's a consideration when installing the osmosis filter: the cost of operation and maintenance over the life cycle of use of the product.

Lynn Folkman, LBBC (11:42):

Another question that's coming up: We had a lot of discussion around plastic. And now a lot of the containers for the water are plastic. Is that safe? Is there research that needs to be done to make sure that that water pitcher that's plastic is safe?

Olga Naidenko, PhD (12:01):

This takes us to the very important — in fact, essential — research topic that so many people are interested in, and that is the topic of microplastic pollution. And it's not quite the same as the big Pacific Ocean garbage patch with visible pieces of plastic, which are floating out there. But even from routine plastic products — that water bottle that's made of plastic, it's probably shed in small, invisible to the eye pieces of the plastic, to the bottled water that the user may be drinking. So those questions are now being raised about plastic-based water treatment systems. Many of them have not been definitively answered as yet. The state of California is making some great progress. In a few years, we should have much more data about microplastic testing in California's drinking water systems, because many components of also the drinking water systems themselves are plastic. So, I think it's an area of emergent research. And we come back to: It's still better to filter your water, but it's important to remember that you don't want that filter to sit open in the sun because a higher temperature exposure can increase the shedding of the plastic component into whatever liquid we are holding in it.

Lynn Folkman, LBBC (13:21):

Thank you. And there are a couple of questions that came in about water filter cartridges that are in refrigerators. Are they effective? Is it the same issue of 'needing to replace those? How do they work and function?

Olga Naidenko, PhD (13:42):

Conceptually, for water filters, most of the technology is based on activated carbon or granular carbon. And my concern about the refrigerator cartridges is that people forget about it. And they think, "Oh, it's there once installed," and they don't do timely replacement. I don't know what the recommended maintenance schedule is; I suspect it would be different depending on the refrigerator model. But whatever it is, I think it's essential to find out what the manufacturer recommendations are on how and when to replace it, and should one do it oneself or call a person with a certification to do it.

Lynn Folkman, LBBC (14:19):

Great. And just one last question: Does reverse osmosis take out essential minerals?

Olga Naidenko, PhD (14:26):

It sure does. And that's why many reverse osmosis systems, once they sell the systems, they may also provide mineral drops to add to the reverse osmosis drinking water, both for taste as well as because basically it's like drinking desalinated water. It actually destabilizes the ionic balance in our body. So, that's usually the manufacturer instructions. The reverse osmosis system will include those recommendations: remineralization, putting the minerals back.