WATER WITH MCS from Kathy's MCS Info Quarterly Dec 24

There have been several news topics during the last year or so about new concerns for the general population over what is in our water. With MCS water is often difficult to tolerate anyway, & as I have had some members phone for suggestions, I thought it may be helpful to some others of you to run through our water options. First, incase some of you have missed some of the new findings & updates I'll summarise to the best of my understanding below:

1)Scientists have raised concerns about the safety of recycled plastic used in bottles for drinks, having shown that there are more chemicals in recycled plastic than in new -from what's used in the recycling process, & also that chemicals adsorbed onto the plastic from its previous use are also present. These can pollute the water (I have experienced this) & the research concluded that no recycled plastic is safe for bottled drinks. International meetings have begun, but until this problem is resolved you may wish to use brands which use new plastic, less proportion of recycled plastic, or glass bottles.
2) Scientists have now discovered large quantities of particles of plastic much smaller than previously known, to be present in bottled water. (Previous studies have shown tiny plastic particles in tap water.) Concern & studies are focussing on the longterm effects of plastics in our body rather than any acute effects, & for the general population, not MCS.
3) Research into removing micro & nano plastics from water is taking place. Current methods assessed: Activated carbon jug filters are poor, only removing particles larger than 5 microns; multi-stage sediment filters with a 1 micron pore size are quite good; RO using pores as small as 1/10,000 micron is one of the best methods; distillation is nearly 100% effective but strips the water of minerals. In early stages of research is using non-toxic hydrophobic natural ingredients to create a liquid solvent that floats on water. When emulsified into the water & then allowed to reseparate, the solvent floats to the surface carrying >98% of nanoplastic contaminants with it, & it can be skimmed off the water. Being hydrophobic, risk of it leaving contamination behind is small.
4) Previous studies showed PFAs (forever chemicals) can be present in water supplies to homes. There are now PFA standards water authorities have to meet, although knowledge of the toxicity of many of these substances is not actually known. The DWI concern is with longterm consequences as they say the low levels in drinking water has no immediate or acute impact on human health based on their current knowledge (though as we know, with MCS & any amount of chemical, there may be).
5) PFAs have now been found in some bottled water. Standards must now be met.
6) PFA standards for bottled or tap water may vary between countries. WHO has made a draft of 'safe' amounts but its process may take a long time to complete. Studies show the best removal of PFAs by purifiers is using Reverse Osmosis & 2 filters.

REDUCING CHEMICAL INTAKE FROM WATER

Please note I am Not recommending anything but providing a basic introduction to the topic to the best of my knowledge. We are all different so try things carefully for yourself.
1) Bottled Spring or Natural Mineral water
These may be better than tap or purified water for some with MCS. Finding one you tolerate often depends on the mineral content &/or the pH value. Both come from natural underground water sources that are protected from pollution, & in the UK & EU must be 'bottled at source'. However, Natural Mineral Water also has official recognition, must have a consistent level of minerals (spring water can vary), must retain its original properties from source to bottle (spring water can undergo treatment) & must show its composition on label (optional for spring water).
NB: Be aware other bottled water eg Drinking, Table or Purified, can be just bottled municipal supplies & also that mineral water can be artificially made with municipal supplies.
2) Purifying tap water
Water companies have to make tap water safe from micro-organisms & usually use chlorine in stage 1 to disinfect the water. Stage 2 is keeping the water disinfected as it travels through the pipes to our

taps. Chloramines (made by adding ammonia to combine with the chlorine already in the water) are usually used for this as they have a longer lifespan- chlorine evaporates within 24hrs but chloramines take days. Be aware chloramines may have less chlorine odour & taste than chlorine. If choosing a water purifier check it removes both. Tap water contains other chemicals from the waters source which you may also want to remove.

WATER PURIFIERS

Using a water purifier sounds an easy solution but you may react to materials of the filters absorbed by the water as it passes through them, so do test them. There are different types of filters & different methods to purify water so look into which chemicals &/or contaminants are removed, availability, ease & frequency of replacing filters, installation & maintenance of plumbed in systems. Some methods also remove helpful minerals naturally found in tap water but some systems have optional remineralization technology to put these back into your purified water.

Methods of water purification - 2 of the best to remove chlorine & some chemicals are activated carbon filters & Reverse Osmosis.

Activated carbon filters attract the contaminants which adsorb to them & clean water passes through. The "activated" means the carbons pores have been opened allowing it to trap contaminants & creating a massive surface area for this. The carbon can be made from different things so you may be ok with one type & not another. Catalytic carbon is activated carbon which has been treated with high temperature gas to alter its surface structure - making it a catalyst for various chemical reactions so it can remove more contaminants eg.it is better at removing chloramines than activated carbon.

Reverse Osmosis (RO) is where water under high pressure is pushed through a semi permeable membrane by a pump. Osmotic pressure is reversed so that water flows from a higher to a lower concentrated solution & the membrane filters out the clean water leaving the contaminants behind. It may make some noises while processing the water (even while taps are off). The pump requires energy. Some pesticides, solvents & VOCs are Not removed by RO but some RO purifiers have an additional carbon filter to remove these. Check the efficiency of an RO system - they can use & waste up to several gallons of water for every gallon they purify (increasing your water bill). Point-of-use RO systems waste much more than traditional RO systems, & reduced waste-water systems are available.

Ceramic carbon filters which come as a cartridge which plumbs into the water supply under the sink & Combination filter systems which may have up to 4 different filters which each remove different contaminants are other options.

Choice of purifier - a brief introduction to the more popular:

Jugs can be plastic, glass or metal & usually use a granulated active carbon filter -ie they are made of loose granules of carbon. They remove chlorine but not all chemicals. Jugs that purify as you pour, rather than leaving to filter in advance, pour more slowly.

Portable/ tabletop water purifiers usually hold a few litres & have a 'tap'. They often have a canister which detaches for you to fill with tap water & then place in the purifier for the water to pass through a RO or filter system. The RO types are plugged into an electric socket to power the pump. Depending on your MCS sensitivities you may need to consider the materials these units are made from.

Undersink water purifiers may need a plumber to install/maintain. They often use RO &/or carbon block filters - ie activated carbon that’s been ground into a fine powder & been compressed to form a solid block which provides better purification than the granular carbon filters but a slower flow rate. Some RO systems make the water flow out of the tap slower.

Whole house water purifiers are fitted (usually by a plumber) onto your pipes where they enter your home so that all your water is purified. (NB the purified water which goes into your water tank may absorb water soluble chemicals from the air around it there).

OTHER SUGGESTIONS

Help your body to cope with & detoxify chlorine by ensuring it has the nutrients it needs including
-Vitamin C (neutralises & undoes damage caused by chlorine & chloramine)
-Iodine (competes with chlorine for absorption & can help prevent chlorine attaching to cell receptors. The chlorine does less damage & is more easily excreted)
-Taurine (an amino acid which chelates chlorine in detoxification).

Bathing
-Hang a bathball on your tap or attach an on-tap filter yourself (if compatible with your tap design)
-Swap your standard shower head for a filter shower head or screw an in-line shower filter on the hose.
Filters for these 4 options vary depending on brand. (NB some only soften water, some also add minerals & some work by combining the chlorine with a metal ion to form a different substance. Of the KDF filters, it is KDF55 which removes chloramine).
-If you tolerate it, add vitamin C powder (try 1000mg as a starting point) to your bath water & let it sit for 5 minutes to neutralise the chlorine & chloramines.
-Use an extractor fan to inhale less chlorine fumes. (air purifiers are not usually for use in humidity).
Treatment -Low dose immunotherapy (usually privately by an environmental doctor) or isopathy (homeopathic approach) can reduce/prevent reactions to specific chemicals/water.