

## The non-toxic laundry



**How to set up a non-toxic laundry at home; how to share machines with others; what alternative washing methods work; choosing the detergent.**

*Keywords: healthy home, laundry, washing, clothes, washing machine, detergent, shared laundry, laundromat, chemical sensitivity, MCS*

### **Clothes are in your face**

We are in close contact with our clothes all day, and with our sleepwear and bedding all night. They touch our skin and we breathe in the fumes they give off.

People with chemical sensitivities can get symptoms from exposure to "clean" clothes. It can cause mild headaches, tiredness or spaciness to severe dizziness in really sensitive people.

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Clothes and fabrics can give off a wide range of fumes from:

- The fabric itself
- Chemicals used to treat the fabric
- Chemicals used to clean the fabric
- Chemicals absorbed by the fabric while you wear it

In this article we talk about how to lessen the exposure to hazardous chemicals on a daily basis. In other articles we look at buying clothes that are not as toxic and how to detoxify new clothes.

### **Laundry detergent**

A common sign of suffering from chemical sensitivity (MCS) is getting dizzy ("brain fog") when walking down the detergent aisle in a grocery store. This is caused by the fumes leaking out of the detergent bottles and boxes.



*The detergent section of a grocery store is often a problem for people with chemical sensitivities.*

When the clothes have been washed, there will be some laundry detergent left in the clothes. This residue clings to the fibers that touches your skin. Your body heat will help evaporate some of it, which you'll then breathe in.

It is vital to use a detergent that is tolerable. Switching to a safer one may be all that is needed to solve problems with clothes.

There is no universally tolerable detergent. Among people with severe multiple chemical sensitivity (MCS) there will be someone who doesn't tolerate any particular detergent. This is true regardless of any claims made by anyone, whether they sell the product or are an enthusiastic user.



*Some of the washing agents that are popular in the MCS communities in North America.*

Look at what is available at a local health food store. Look at the labels. Avoid anything that has essential oils or other forms of scenting. You can perhaps try those later on, once you have a setup that works for you.

Some people use a mild non-toxic dish detergent to wash their clothes, instead of one specifically marketed for washing clothes.

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Be aware that some products make deceptive claims of being ecologically friendly, but really aren't. This is called "greenwashing," and is quite common.

Washing clothes with just plain water only works for clothes that are not really dirty. It can work for clothes worn around the house, but it won't work for clothes that have been worn in a store, and it doesn't really remove body oils. If your water has a lot of minerals in it ("hard water"), washing without a detergent may cause a buildup of minerals in the fibers. This could irritate the skin.

#### **The most basic detergents**

Some people have to use the most natural of all detergents: baking soda or borax. Both are mined out of the ground, though some baking soda is also produced in factories from natural materials.

In North America both baking soda and borax are available in most grocery stores in large boxes.

Baking soda is called "natron" in some parts of the world. It is also called "sodium bicarbonate," or "bicarbonate of soda." It appears to be available world wide, though it may take some effort to find a local source in some countries.



*Baking soda is tolerated by most people with MCS. In some countries it is called natron or other names.*

Baking soda has other uses, such as leavening bread, tenderizing meats, cleaning agent, anti-fungicide, extinguishing fires, ingredient in tooth paste, and several medical uses, such as antacid.

Borax is a mineral that comes from mines in California and Nevada. It may not be available outside North America.

Borax is used in commercial washing detergents, as a natural fire retardant, and to deter mold and cockroaches.

It is more alkaline than baking soda so be careful inhaling the dust. You may need to double-rinse the clothes to avoid skin irritation.

### **Fabric softener**

Avoid using fabric softener if at all possible. Advertising has a lot to do with people believing it is necessary to use a softener. Softeners are used much more in North America than in Europe and Australia.

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Fabric softeners do help with stiff cotton jeans and to avoid static cling with some synthetic fabrics. The jeans will get soft once they are on you. As for the sticky fabrics, consider using other kinds of fabric.

Some people pour half a cup of white vinegar into the fabric softener dispenser, or add it to the rinse cycle. We have no personal experience with that, as we have no need for it.

The worst kind of fabric softener is "dryer sheets." The chemicals are transferred by heat in the clothes dryer and are impossible to wash out of the fabric again.



*Dryer sheets are particularly noxious for people with chemical sensitivities.*

Currently, dryer sheets are not available in Europe and Australia. Perhaps people there have better sense than Americans.

### **A clean machine**

If the washing machine and clothes dryer are used by others, that can contaminate your clothes. Residues of the laundry products previously put in the machine will rub onto your clothes. This can make a major difference.

In a household with multiple people, all clothes should be washed using non-toxic detergents. If the machines are used by a roommate, offer to buy and pay for all laundry products. Otherwise compliance may be spotty and you can suddenly end up with a load you can't wear.

In one case the solution was for the household to have two washing machines.

### **Which washing machine to buy**

We recommend a top-loading washing machine with a steel drum and a steel tub. They should either be of stainless steel or steel with a ceramic coating.

Some washing machines have a steel drum and a plastic tub. They should be avoided, since the plastic can absorb and re-release toxic chemicals. It is difficult to check whether the drum is steel or plastic, so you may have to check with the sales agent, or on-line sales materials.

Front-loading machines are dominant in Europe and among green-minded people because they use less water. But they have a lot of soft plastic that connects the drum to the door. It can take a long time to offgas this plastic, and it tends to collect water and become a mold hazard.

It seems to make sense to choose simpler models in general. The more gimmicky electronics, the more things can fail, which either will require the visit of a (usually stinky) repair person, or the purchase of a new machine.

A machine that automatically weighs the clothes and from that determines how much water to use is a nuisance when breaking in new clothes, or rinsing out a barely-tolerated detergent.

People with electrical sensitivities would probably feel better around a simple machine with less electronics and no wireless connection.

A new washing machine will be toxic. When it runs, the electric motor will get hot and nasty chemicals will evaporate from the electromagnets inside the motor. Other problems are circuit boards, gaskets, etc. You may need to hook it up in a garage or outside and run it daily for a couple weeks. Fill the tub with hot water and detergent, let sit for an hour, then run as normal. Repeat.

### **If you have no washing machine**

Shared laundries and laundromats should be avoided since you'll have to dodge the fumes in the room and the contamination of your clothes from other people's laundry chemicals. But sometimes it can't be avoided. Here is what some people do to make it work (somewhat):

Wash at off hours to avoid other people. Ask the owner when they are the least busy.

Buy more clothes so you have to wash less often, then use several machines at the same time.

Run the washer through a full wash cycle without any clothes, to rinse it of detergent residue.

Run the dryer with a sopping wet towel to clean it inside.

Quickly pack up the cleaned clothes in sealed bags, so the toxic air in the room does not contaminate them.

Air dry the clothes at home instead of using a dryer.

For very sensitive people, these are just temporary measures, they are not really solutions.

### **Alternatives to shared laundry**

If you live in an apartment or a travel trailer with no washing machine, there are several alternatives to using a laundromat.

Some people in a small apartment with no hookups bought a washing machine which they placed on the floor in the kitchen and hooked up to the kitchen sink and kitchen faucet. It wasn't very decorative, but it worked for years.

A man who lived in a travel trailer bought a compact RV-model washer, which he hooked up to the kitchen faucet and had a drain hose out the door. He powered it with a portable generator when he camped off the grid.



### *Washing clothes with an Amish washing plunger*

Clothes can be washed by hand using various ingenious devices invented by the Amish (a religious sect that shuns electricity). We like their washing plunger, which is quite effective, though it takes some work to do a load. This device is available from Lehman's store in Ohio. It is shaped like a regular plunger but made of plastic instead of rubber. You could build one yourself.

You can wash outside or you can do it with a bucket in a bath tub or shower stall.

Another Amish device is the James Washer. It is rather expensive and can't handle as many clothes as the washing plunger can. But it takes less effort to operate.

We have not tried the traditional wash board, but they still exist. We have not heard good things about the little ball-shaped washers that are hand-cranked.

### **Second rinse**

Whatever detergent is used will remain in the clothes after they have been washed. This is a problem for some people, even when using non-toxic detergents.

Washing machines generally rinse the clothes just once. A second rinse can help, though there will still be some residue left.

Some machines have a button to get a second rinse. In machines without this feature, it should be possible to manually set it for an extra rinse once the regular washing program has finished.

### **Water supply**

The water the clothes are washed in can cause problems, as it too can leave a residue in the clothes. The fumes can also stink up the laundry room.

The problem with municipal water is typically the chlorine. This can be controlled by adding a chlorine filter. There are small models available that are intended for shower heads.

Some water gives off a sulphur smell. This is caused by bacteria that eats iron in the water. It may be solved by cleaning the water heater or installing an iron filter.

Well water can have high levels of minerals, which can irritate the skin. Try to install a sediment filter and if that doesn't work try a carbon filter.

Water filters can be installed for the whole house or just for the washing machine. If you live in a rented space it is easiest to just install a filter on the hose to the washing machine, as it can easily be removed again when moving out.

To determine whether filtering the water may help, try to rinse the newly washed clothes in a bucket with distilled water bought in a store.

### **Avoiding mold problems**

Leave the door open to the washer once done, so it can dry out. Water collects in the bottom of the washer where you can't see it.

Front-loading washers are more prone to mold problems because of the water that collects around the door seal.

Some people with front-loaders use a towel to dry the gasket. Then they use a fan to dry the insides.

Do not leave the house while the washer is running. We have seen accidents where the drain hose got loose or the drain got plugged, so lots of water spilled on the

floor and ran into other rooms. Flooding is a major mold hazard and must be attended to immediately.

### **Drying the clothes**

A clothes dryer must be vented directly to the outside. We have once seen a mis-guided "green" contraption that intended to "filter" and redirect the dryer exhaust to the house to save on the heating bill. Bad idea for anyone, as it is both a toxic problem and a mold hazard.

If you live in a highrise with a shared dryer exhaust shaft, make sure the exhaust vent doesn't leak so you can get other people's dryer exhaust leaking into your apartment.

Like for sharing a washing machine, sharing a clothes dryer with others is difficult. Residue from detergents and other laundry chemicals rub off on the inside of the drum and then onto the next load. Dryer sheets are especially difficult.

Drying clothes on a line may be a good option, at least in the warm season. Clothes lines are illegal in some areas, as they are considered something poor people do and thus thought a blight on more affluent areas (truly!).

You might still be able to use a small foldable clothing rack on a porch or balcony. Such a rack can also be used inside in the winter, but be careful not making your home too humid.

### **Dry cleaning**

Dry cleaning is not actually dry. The clothes are washed with a nasty chemical named perchloroethylene, or "perc" for short.

In some areas there are alternative cleaners that do not use "perc." Some use liquid carbondioxide, which is non-toxic, but requires very expensive equipment. Most of the alternative cleaners use some sort of chemical detergent, which is probably better than "perc," but isn't non-toxic.

Be skeptical of any claims of "organic" or "green" these places may make. It may simply be "greenwashing."

It is better to avoid clothes that have to be drycleaned, or see if they can be washed on a gentle setting.

If you cannot avoid dry cleaning, you could air out the cleaned clothes for a week or so before using them. They should be aired outside your living space, such as in a garage or a well-ventilated basement.

### **Town clothes**

Severely sensitive people have separate sets of clothes that are only used when going to stores or other toxic places.

When inside a store (and many other places), the clothes will absorb ambient toxic fumes, such as fragrances, cleaners, pesticides, etc. They are then slowly re-released by the clothes for many hours afterwards, and can cause symptoms in people with severe chemical sensitivities.

Most people are not able to detect this "store smell." Some are so sensitive they can actually identify which store a garment has been inside, just from the smell (every store has a unique smell).

It may be difficult to wash this away when using mild non-toxic detergents. Some people wash their town clothes twice, others just wash them once and keep them separate.

Some people reserve a specific color for their town clothes so they are easy to identify.

### **More information**

For other articles about non-toxic clothes and laundry, see [www.eiwellspring.org/copingwithEI.html](http://www.eiwellspring.org/copingwithEI.html).