

## INTRODUCTION

Clean clothes are important to everyone. Getting clothes clean is not hard if you use the correct methods and laundry products. Washing machines, water, and detergent are the basic equipment for getting clothes clean, so the styles of machines, types of water, and detergent used are very important. Other laundry tools, like bleach, fabric softeners, and stain removal tips, are also discussed in this guide.



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## WASHING MACHINES

Today, there are many types of washing machines to choose from, such as traditional top-loading machines, high-efficiency top-loading machines, and front-loading machines.

### Top-Loading Washers

Most people are familiar with top-loading washers since they grew up with them. They use an agitator that sticks up through the middle of the wash basket. The agitator turns the clothes over while the wash basket spins to help clean clothes and extract water. Newer models of top-loaders come with many features and have larger capacities. Generally, the traditional top-loading washer is the least expensive to purchase and finishes loads the quickest, but consumes the highest amount of water. The lifespan of a top-loading machine is about 10–12 years.

### High-Efficiency Top-Loading Washers

High-efficiency top-loading washers do not have an agitator and can therefore hold more laundry, use less water to wash, and extract more water in the spin cycle. This cuts drying time and saves energy and money.

### Front-Loading Washers

Although the most expensive initially, front-loading washers generally use one-third less water than top-loaders and spin the fastest, which saves the most money over the life of the machine. The wash basket is set horizontally and uses gravity to pull water through clothes. These machines also use less detergent, which saves more money while using fewer chemicals. They also offer a pause feature in the wash cycle, allowing additions later in the wash cycle.

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## **WATER**

The amount of water used for the wash depends on the type of machine and the size of the load. Most machines will give choices for small, medium, large, or extra large/heavy duty loads.

Good washing action requires plenty of room for clothes to move around, so never crowd the wash basket. The water and detergent solution must be able to circulate through clothes to loosen and carry away soil. Modern fabrics need even more room to move around than other fabrics. Set the machine's water level control for the size of the load to be washed.

Powder or liquid detergents can be used in traditional top-loading machines. To make sure the detergent dissolves in the water, add the detergents to the wash basket first, fill the basket with at least 3–4 inches of water, and then add the clothes. This will avoid “detergent burn” on your clothing when undiluted detergent touches your clothes.

Bleaches—oxygen or chlorine—can be added at this point, but first turn on the agitator to equally dissolve both the detergent and bleach. **Do not add fabric softeners with the detergent at the beginning since they cancel each other out.** Only add fabric softener during the final rinse or in a fabric softener dispenser cup (if your machine is equipped with one). The dispenser cup will add the fabric softener during the correct rinse.

High-efficiency top-loading washers and front loaders will have computer controls to monitor the water levels for the load based on the weight of the load. These machines will most likely have automatic detergent, bleach, and fabric softener dispensing cups. Cleaning agents are added at the beginning, and the machine will dispense them at the right stages.

### **Water Temperature**

#### **Hot water**

- Removes dirt from heavily soiled items.
- Kills more germs than cold water.
- Fades the dyes in some colored clothes.
- Tends to cause wrinkling in some modern fabrics like permanent press.

#### **Warm water**

- Usually gets lightly soiled clothes clean.
- Does not kill germs unless a disinfectant is added.
- Is safe for most colored clothes.

#### **Cold water**

- Requires a cold-water detergent to get clothes clean. If a cold-water detergent is not available, dissolve detergent powder in hot water before adding it to the wash water.
- Requires more detergent than warm water to get clothes clean.
- Does not kill germs unless a disinfectant is added.
- Recommended for washing some delicate fabrics.

**Note:** Water reaching the washing machine is cooler than in the water heater. To get very hot water in the washer, it may be necessary to set the water heater temperature to high.

### **Water Types**

There are two main types of water: hard and soft. When using soap rather than detergent, soft water cleans clothes better than hard water. Hard water, which contains mineral deposits, requires more soap or detergent, and clothes don't get as clean as they do in soft water. Minerals in hard water combine with soap to form a scum, which causes laundry problems. Detergents work well in soft or hard water unless the water is especially hard.

### **Water Softeners**

Packaged powders can be purchased to soften water, or you can purchase or rent a water-softening machine. Figure out how much the powders would cost and compare that with the price of a machine.

Water-softening machines use salt to remove minerals from the water, so the salt content of household water is increased by the softening process. People on low-sodium diets may prefer to use packaged water softeners.

Packaged water softeners come in two types: precipitating and non-precipitating softeners (water conditioners).

Precipitating water softeners settle out the minerals that make water hard, making the water cloudy. These softeners work better in non-automatic wringer washers than in automatics because you lift the clothes out of the water instead of spinning the water out of the clothes.

### **How to Use Water Softeners**

When using a powder, follow directions on the package. Add the softener to the water before adding soap or detergent. Add enough softener to make the water feel slippery. For best results, use a water softener in the rinse water, too.

Water softening machines soften water as it flows through the machine. Follow operating instructions carefully and replenish salt as recommended.

## **SOAP AND DETERGENT**

Water works with soap or detergent to get clothes clean. Soaps and detergents loosen dirt from clothes, keeping dirt in the wash water so it doesn't get back on the clothes.

### **Choosing Soap or Detergent**

Most areas of New Mexico have hard water, so use detergent rather than soap. When soap mixes with hard water it forms a soapy scum that can turn clothes gray.

An all-purpose, heavy-duty detergent does a good job of cleaning most clothes. For delicate fabrics that require hand washing, use a gentler detergent such as dishwashing detergent.

Most stores carry many brands of laundry products. All detergents contain similar types of cleaning ingredients. Detergent powders are the most common laundry product and are the least expensive. Liquid detergents are made especially for washing clothes in cold water, although they work in hot water, too.

Some people like lots of suds in the wash water. However, too many suds can cut down on washing action and are hard to rinse out. Suds may also damage the washing machine. High-sudsing detergents are not recommended for use in front-loading washing machines. Low-sudsing detergents can be used in either front- or top-loading machines.

### **How to Use Soap and Detergent**

- Directions on the package tell how much soap or detergent to use in an average-sized washing machine with normally soiled clothes.
- Measure soap or detergent carefully. Using too much wastes money and may make so many suds that clothes don't get clean. If not enough detergent is used, body oil and dirt may not come out.
- It may be necessary to add more soap or detergent if using an extra-large machine, if the clothes are very dirty, or if the water is very hard.

### **Getting Clothes White Again**

White clothes and linens may turn gray if not enough soap or detergent is used or if clothes are not thoroughly rinsed. To get clothes white again, follow this procedure:

- Wash the clothes again in hot water.
- Add enough water softener to make the water feel slippery (about 1 cup).
- If the water becomes sudsy, the clothes were not rinsed enough. Wash them again adding only water softener.
- If the clothes do not whiten, add soap or detergent and rewash.

## **BLEACH**

Bleach helps keep white clothes white and helps remove many stains. Measure bleach carefully because too much bleach will damage clothes.

### **Chlorine Bleach**

Chlorine bleach comes in liquid and powdered forms, and a variety of brands are available. All liquid bleaches contain approximately 5% active ingredient. Select the product that provides the best results.

Liquid chlorine bleaches are usually less expensive than powdered forms. Both forms kill germs. Some fabrics and finishes can be damaged or discolored by chlorine bleaches, so read the labels on clothes and bleach containers before using chlorine bleach.

Iron deposits in water will interact with chlorine bleach and make rust stains on clothes. Chlorine bleach also makes some yellow stains worse and may make holes in fabric.

Chlorine bleaches may be used on:

- Dish towels
- Bath towels
- Sheets
- Color-fast prints
- Pillowcases
- Tablecloths
- White socks
- T-shirts and undershirts
- Other chlorine bleach-safe items

**Caution:** Do not use chlorine bleach on silk, wool, spandex stretch fabrics, blends of these fibers, or fabrics with certain dyes and finishes. Check clothes labels and tags to determine if they can be safely bleached.

### How to Use Liquid Chlorine Bleach

For most top-loading washing machines, do not use more than 1 cup of liquid chlorine bleach. If the machine is extra large, use up to 1 1/4 cups of bleach. For front-loading machines, do not use more than 1/2 cup of liquid bleach. For hand washing, do not use more than 1 tablespoon of bleach per gallon of water.

Mix the bleach with lots of water before mixing with soapy wash water. Otherwise, the bleach may make holes in the fabrics. Rinse clothes well to remove the bleach since it may weaken the clothes if it stays in them.

### Oxygen Bleach

Most oxygen bleaches are powders. They can be safely used on any clothes that need bleaching and are safe for all fabrics, fabric finishes, and colored fabrics. Look for the words “Safe for all fabrics” on

the package. A variety of oxygen bleach products are available.

### How to Use Oxygen Bleach

- Follow directions on the package.
- Add oxygen bleach to the wash water.
- Most oxygen bleaches work best in hot water.
- Rinse the clothes well.
- For best results, use oxygen bleach each time the items are washed.

### FABRIC SOFTENERS

Fabric softeners and water softeners are not the same. Fabric softeners make clothes soft and fluffy and reduce static electricity that makes clothes cling. Water softeners, however, remove mineral deposits from hard water.

Fabric softeners come as liquids, dryer sheets, and in-dryer dispensers. Liquid fabric softeners are added to the final rinse water of the washing cycle. Fabric softener sheets are added to each drying cycle. Fabric softener dispensers are fixed to the side of the dryer and soften laundry for several drying cycles before they must be replaced.

### Fabric Softener Cautions

- Follow the package instructions carefully for best results.
- To prevent spotting, be sure to dilute liquid softener in water before adding it to the laundry.
- Dryer sheets may cause oily spots on some fabrics.
- Check garments carefully as they are removed from the dryer. If spots occur, rub them with a detergent paste and rewash.

### SORTING AND INSPECTING LAUNDRY

Sort and check all clothes before putting them into the washer. This will help keep clothes looking nice longer. Choosing the right water temperature for different fabrics and treating stains before laundering also keep clothes looking nice.

## How to Sort Clothes Into Groups

- Test colored clothes to see if the colors run. If they do, wash them separately or with other clothes of the same color.
- To keep white clothes bright, do not wash them with colored clothes.
- Do not wash lightly soiled clothes with those that are heavily soiled.
- Sort clothes that shed lint from those that don't.
- Separate delicate items from sturdy ones.
- Don't overload the washer. Each load of clothes should have enough room for good washing action.
- Mix small items with large ones for good washing action. For example, put washcloths and towels in with sheets.

## Inspect Every Item

- Empty and brush out pockets and cuffs.
- Mend small rips and tears.
- Remove pins and ornaments.
- Close zippers and hook fasteners.
- Check for stains that may need special attention.

## PRETREATING AND REMOVING STAINS

Before washing, rub heavily soiled areas such as shirt collars or cuffs with a wet bar of soap, liquid detergent, or a paste made with powdered detergent and water. This will loosen heavy soil.

On permanent press clothes, pretreat grease spots with soap or detergent and let stand for at least two hours.

## Guides for Removing Stains

The sooner a stain is treated, the easier it is to remove. These stains can usually be removed by pretreating with soap or detergent:

- Cosmetics
- Crayon
- Grease
- Ice cream
- Oil
- Grass
- Milk
- Light scorch

If the clothes are still stained after they have been washed and rinsed, try using a bleach. Read the label on the bleach container to be sure it is safe to use on the stained clothes.

If fresh blood, egg, catsup, or soft drinks stain washable clothes, soak the stained spot in cool water for half an hour or more, then rub gently. If the stain doesn't come out, work soap or detergent into the fabric, then rinse.

Do the same for chocolate, soup, and gravy stains. Let the clothing dry. If a greasy stain is still there, sponge it gently with a non-flammable dry cleaning fluid, which can be purchased at drug or grocery stores. Follow directions on the label carefully.

Coffee, tea, and fruit juice stains will usually come out after soaking and rubbing. However, if boiling water won't hurt the fabric, there's a faster and easier way to remove these stains. Hold the garment over a sink or bucket and pour boiling water through the spot. Pouring the water from about two feet above the spot will force the stain out.

## ELIMINATING GERMS FROM CLOTHES

Boiling clothes or hanging them in the sunshine were once common ways to get rid of germs. With modern fabrics, fabric finishes, and washing methods, other ways can be used to disinfect your laundry. Liquid chlorine bleach that contains 5.25% sodium hypochlorite will destroy most germs.

Quaternary, pine oil, or phenolic disinfectants can be safely used on any washable fabrics. Pine oil disinfectants must contain at least 80% pine oil to destroy germs.

It is always a good idea to use a disinfectant in the wash when someone in the family has a bad cold, the flu, or some other infectious illness. Disinfecting the wash can help prevent other family members from getting the same illness.

Use a disinfectant when washing at a laundromat. Illness from another family can be passed on if the washing machine is not disinfected before it is used. Wipe off the surface of the machine with a disinfectant, then add disinfectant to the wash cycle. Follow the directions on the disinfectant's label.

## What to Use to Destroy Germs

Quaternary disinfectants (“quats”) are available. CO-OP Household Sanitizer is available in certain supermarkets; Roccal is available from janitor, dairy, and poultry supply stores.

The following liquid chlorine bleaches are available in grocery stores: Clorox, King (liquid) Bleach, Purex.

The following pine oil disinfectants are available in grocery stores: Fyne Pyne, Fyne Tex, White Cap, King Pine.

The following phenolic disinfectants are available in grocery stores: Al Pine, Pine-Sol.

Check local supermarkets or drugstores for “house brand” products, too.

*Brand names appearing in publications are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned. Persons using such products assume responsibility for their use in accordance with current label directions of the manufacturer.*

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