

Quick 'n Easy Stain Removal

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Quick and Easy Stain Removal

In most families stain removal is a necessary part of clothing care. Quick and cautious stain removal keeps clothes in wearable condition for a longer time and thus helps reduce

clothing costs. This bulletin explains how to remove many stains from washable fabrics using easily available laundry supplies.

Clothing Care and Fiber Content Labels

You know if a fabric is washable by reading the care label. If the label has warnings such as "do not use chlorine bleach," then you cannot safely use liquid chlorine bleach in stain removal.

Clothing manufacturers are required to tell you the recommended care procedure on a "permanent care label." These labels often appear at the neckline of garments, but sometimes they are in a side seam. These labels tell if the manufacturer recommends home laundering or drycleaning for routine care of the clothing. A recommendation for drycleaning may relate to the component parts of the garment such as interfacings and trim, rather than to the basic fiber content of the garment. Tailored clothes of wool are often "dry-clean only" while wool sweaters are often "hand washable."

Hang tags or other labels on clothing tell the fiber content. If you understand fiber characteristics, this information can help you decide about the best stain removal procedure. For example, wool or silk can be severely damaged by liquid chlorine bleach, so this bleach should be avoided. Hang tags may also tell about fiber finishes such as soil release or durable press that are not visible on clothing but can make stain removal easier or more difficult. For example, oily stains bond more firmly with durable press fabrics than with untreated fabrics, making removal more difficult.

Fabrics Labeled "Dry-clean Only"

The procedures described here do not apply to garments labeled dry-clean only. Clothing labeled "dry-clean" or "professionally dry-clean" should be taken to the cleaners promptly. The fiber content of the clothing and the type of stain should be identified for the cleaner. Even professional cleaners cannot remove all stains. The cleaner will usually warn you if the stain cannot be removed, but sometimes this is difficult to predict. Dye stains on colored fabrics are an example of stains that may not be completely removed.

A Note about Modern Fabrics

Synthetic fibers such as acrylic, nylon, olefin, polyester, and blends of these fibers or cottons with permanent-press finishes are tough and durable, but have a special attraction for oil stains. Oil stains should be removed promptly. If oil stains get dryer dried or ironed into fabrics containing these fibers or finishes, removal may be extremely difficult, if not impossible. These oil stains show most on plain medium colors such as light blue or khaki. On the other hand, if treated quickly, oil stains usually can be easily removed.

Synthetic fiber fabrics are also heat sensitive. These fabrics shrink and melt in high temperatures. They can get more-or-less "permanent" wrinkles in the spin-cycle of a washing machine set for a hot-water wash, or from an over-crowded dryer that has run too long. Steam pressing can sometimes remove heat-set wrinkles, but the melting temperature of the fibers is so close to the temperature needed to iron out wrinkles that pressing is tedious and must be done carefully to avoid melting and creating holes. The restored garment may fit differently because of the heat shrinkage.

It is easy to prevent wrinkling in washable blends and permanent press clothes:

- avoid overloading the washer; clothes should move freely,
- be sure the washer is set for "warm" not "hot" water temperature or for the "permanent press" cycle,
- dry on permanent press setting,
- remove from dryer at end of cycle; do not overdry,
- hang on hanger; temporary wrinkles generally "elax" or fall out in a few hours.

Fabrics containing -vinyl or natural rubber will be damaged by most oil solvents. Oil solvents tend to remove the plasticizer in vinyl film fabrics, making them stiff.

Olefins may be damaged by perchloroethylene solvent, but are resistant to trichloroethylene and fluorocarbon drycleaning solvents.

Acetate fabrics will dissolve in fingernail polish remover (acetone). Triacetate and modacrylic fabrics can be damaged by acetone or paint thinners.

Silk, wool, and other hair fibers, such as camel or cashmere, will dissolve in fresh liquid chlorine bleach. Dilute solutions of liquid chlorine bleach will cause permanent yellowing and stiffening of wool fibers and usually cause weakening and color loss in silk.

Cellulosic fibers, such as cotton, linen, rayon, and ramie, will be weakened by repeated exposure to dilute solutions of liquid chlorine bleach, but bleaches can be safely used on cellulosic fibers for purposes of stain removal. Undiluted bleach can weaken fabrics so that they tear or wear out more quickly.

Garments with Contrasting Colors or Trim

Many garments are designed with dark fabrics and white trim or white fabrics and bright colored trim such as red piping. When these fabrics are labeled washable, people often complain that the colors have "run." The white shirt becomes streaked with pink from the red trim.

Sometimes this problem can be resolved by rewashing the garment in a heavy-duty detergent with warm or hot water. The excess dye that was not permanently in the trim is not likely to be very firmly deposited in its new location either, and sometimes a simple repeat washing will rinse it away. Sometimes bleaching will help, but often the bleach will change the color of the trim and further change the appearance of the garment.

Since there are no regulations about color-fastness labeling, there is little that consumers can do when they have problems with color-fastness except complain to the manufacturer or retailer who sold the goods. As long as care labeling procedures have been carefully followed, most reputable businesses will respond to your complaint in a positive way.

Although it may cramp your style, a way to avoid these problems is to not buy clothing with extreme color contrasts.

Removing Stains from Washable Fabrics: General Procedures

The following general procedures apply to nearly all stains. Fresh stains are much easier to remove than old ones, so take care of stains promptly.

1. Blot up any excess liquid with a clean white cloth, paper, or other towels. Remove excess solids by gentle scraping or chipping with a dull knife or metal spatula. With some solids such as heavy amounts of surface mud removal may be easier after the stain has dried. Excess can be brushed off before the clothing is submerged for washing.
2. Avoid rubbing the stained area with a linty terry towel or a dark-colored cloth. You may complicate the problem.
3. Never rub a fresh stain with bar soap. Soap sets many stains.
4. Decide if the fabric is washable or drycleanable. If drycleanable, take to the cleaners as soon as possible (within 24 to 48 hours).
5. Do not try to treat suede, leather, or fur. Professional cleaners are needed for these items, and even some professionals do not offer this service.
6. Avoid using hot water on stains of unknown origin. Hot water can set protein stains such as milk, egg, or blood.
7. Test stain removal agents on a seam or hidden area of the garment to be sure it does not affect the color or finish of the fabric before starting on the stain.
8. Avoid excessive rubbing unless fabric is tough and durable. Rubbing can spread the stain and damage the fiber, finish, or color.

9. Do not iron or press stained fabrics. Heat will set most stains.
 10. Check laundry for stains before washing. Many stains need pretreatment.
 11. Inspect wet laundry before drying to be sure stain has been removed. If a stain is still evident, do not dryer dry. The heat of drying will tend to make the stain more permanent.
 12. Wash heavily soiled items separately. During laundering soil is broken into smaller particles and can be redeposited on cleaner clothing if insufficient detergent is used, water temperature is too low, washing time too long, or washer is overloaded with too many clothes.
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Spot Treatment Technique (Sponging) for Apparel Fabrics

A spot treatment confines the stain to a small area and keeps it from spreading. This method is sometimes called "sponging." For spot treatment you need a supply of absorbent material such as, clean rags or paper towels, and a drycleaning solvent, spot remover, or aerosol pretreatment spray.

Follow these steps:

1. Pad the working surface with clean rags or paper towels that can be stained as you work.
 2. Place the stained area or spot on the garment face-down over the padded surface.
 3. Dampen a small white cloth with solvent.
 4. Use the dampened cloth to pat the stain from the wrong side. Feather the edges of the stain working from the outside toward the center to keep the stained area from getting larger.
 5. As the stain transfers to the absorbent material beneath, move it to a different place on the absorbent material so the stain has a clean place to exit into.
 6. Repeat this procedure until all traces of stain are gone. Launder to remove any ring that might be left by the solvent.
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Chemical Solvents and Supplies

Supplies needed for stain removal can usually be found in grocery, drug, general merchandise, or paint stores.

Many commercially available products have proprietary formulas that are protected by patent rights and not available to the public. Ingredients listed on labels for safety

purposes can help you decide if the product will be useful for the stain removal task- you have to do. There is no miracle product that will remove all stains.

Detergents

- Heavy-duty liquid detergents (Era, Fab, Grease Relief, Tide, Wisk)
- Light-duty liquid detergents (Delicare, Ivory, Lux, Woolite)
- Powdered detergents (Amway, Cheer, Dash, Oxydol, Sears, Tide)

Bleaches

- Hydrogen peroxide
- Powdered all-fabric bleaches (sodium perborate)(Biz, Borateem, Clorox 2; Purex, Snowy)
- Liquid all-fabric bleaches (Snowy, Vivid)
- Liquid chlorine bleach (sodium hypochlorite)(Clorox, Hi-lex, Purex)

- Liquid chlorine bleaches have a limited shelf-life. If your bleach is more than six months old and has no effect on stains, it may need to be replaced with fresh bleach.

- To test for colorfastness to liquid chlorine bleaches, mix 1 tablespoon of bleach with 1/4 cup of water. Use an eyedropper to put a drop of this solution on a hidden seam or pocket edge inside the garment. Let it stand two minutes, then blot dry. If there is no color change it is safe to use the product. Powdered bleach packages have directions for doing colorfastness tests.

Pretreatment Products

- Aerosol sprays-petroleum-based solvent (Clorox, Shout, Spray'n Wash)
- Pump-type sprays-- detergent based (Clorox, Shout, Spray'n Wash)

Absorbent Materials

- Clean white cloths
- Paper towels (white)
- Sponges (white or neutral colored)

- Caution: Colored sponges or paper towels can bleed dyes onto fabrics, making dye stains that may be difficult to remove.

Odor-reducing Agents

- Activated charcoal
- Calcium carbonate
- Soda

Stain Removal Chemicals

Common name	Chemical	Brand Names
Alcohol (rubbing)	Isopropyl	-
Ammonia	ammonium hydroxide	Ajax, Bo Beep, Top Job
Color remover	sodium hydrosulfite	Rit, Tintex
Commercial stain removers*	isopropyl alcohol or other unspecified ingredients	Easy Wash, Tech, Whizz
Drycleaning fluid or petroleum-based pretreatment solvent	perchloroethylene, trichloroethylene petroleum distillates	Energine, Clorox Prewash, Shout, Spray n'Wash
Enzyme presoak products**	amylase, protease, lipase	Biz Bleach, Axion
Lemon juice and salt	citric acid and sodium chloride	-
Nail polish remover	acetone	-
Rust removers***	hydrofluoric acid, oxalic acid	RoVer, Whink
Photo supply acid fixer	sodium thiosulfate	-
Turpentine	terpene	-
White vinegar	acetic acid	-

* Limited testing on these products has shown them to be less effective than advertised.

**These must be used at body temperature for enzyme action to occur, Chlorine bleach and hot water inactivate enzymes.

***Do not use these products with chlorine or oxygen type bleaches.

Note: Some of these products may no longer be available; while new products have also been developed.

Follow These Safety Precautions

While many stain removal, chemicals and bleaches are commonly used around the home, they are still dangerous. Some are flammable; others are toxic. Here are some rules to keep in mind regarding their use:

- Store stain removal materials out of the reach of children. Do not store with food products.
 - Read all label directions and warnings. Store chemicals in their original containers so label directions are available in case of an accident.
 - Use all chemicals and commercial stain removal product according to label recommendations.
 - Avoid getting the chemicals on your skin. Some are easily absorbed.
 - Use drycleaning solvents and other chemicals in a well-ventilated room. Toxic fumes can cause illness.
 - Do not use solvents near an open flame or electrical outlet.
 - Seal containers so that fumes can't escape.
 - Never mix stain removal materials together (bleach and ammonia together form toxic fumes).
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Classification of Stains

The system used here in classifying stains for removal from washable fabrics is not the only one that has been used. Other books or sources may suggest different methods that also may work. The purpose here is to describe at least one method that should give good results using readily available consumer products or supplies if used correctly.

This stain classification system starts with stains that require similar treatment and are easiest to remove if treated promptly and correctly. Stains that require two-step or special treatment are listed last.

Protein Stains

Soak in cold water. Launder.

- Baby food
- Milk
- Baby formula
- Mucous
- Blood
- Cheese sauce
- Mud
- Cream
- Pudding
- Egg
- Urine
- Feces
- Vomit
- Gelatin
- White glue; school paste

- Ice cream

Fresh protein stains can be removed by soaking and agitating in cold water before washing. These stains contain other ingredients besides protein, but it needs treatment first. If hot water is used first, it cooks the protein, causing coagulation between the fibers in the yarns of the fabric, making the stains more difficult to remove. If protein stains are dried or old, scrape or brush off crusted matter (if any), then soak in cold water using a detergent or an enzyme presoak product.

After treating the stain, launder in warm (not hot) water, rinse, and inspect. If stain remains, soak an additional half-hour, then rewash. Bleach may be necessary if the stain was colored, such as baby food beets, strawberry gelatin, or ice cream.

Tannin Stains

Do not use soap (bar, flake). Use detergents.

- Alcoholic beverages
- Beer
- Berries (cranberries, raspberries, strawberries)
- Coffee
- Cologne
- Felt-tip water color pen or washable ink
- Fruit juice (apple, grape, orange)
- Soft drinks
- Tea
- Tomato juice

Fresh tannin stains are usually removed by detergent (not soap) washing in hot water (as safe for fabric) during laundering without any treatment. Use of soap (bar soap, soap flakes, or detergents containing natural soap) will make a tannin stain permanent or at least more difficult to remove. Be sure to check the ingredients list of your detergent for soap. More brands now include it for economic reasons. Old tannin stains may need bleaching for more complete removal.

Oil-based Stains

Use heavy-duty detergent with hot water.

- Automotive oil
- Hair oil
- Bacon fat
- Hand lotion
- Butter/margarine
- Lard
- Car door grease

- Mayonnaise
- Collar/cuff greasy rings
- Salad dressing
- Cooking fats and oils
- Suntan oil or lotion
- Face creams

Oil stains can be removed by pretreatment with a heavy-duty liquid detergent, an aerosol petroleum-based solvent pretreatment spray, or a pump-type detergent-based pretreatment spray. If these products are unavailable, you can use a powdered detergent that is mixed with water to make a runny paste and apply that to the stain.

The heavy-duty liquid detergents or aerosol sprays are more convenient and effective. Work the full-strength heavy-duty liquid detergent into the stain or spray with the pretreatment product, then wash the garment using hot water (if safe for fabric), the recommended amount of detergent for a regular laundry load, rinse, and inspect before drying. Repeat this treatment if removal is incomplete the first time.

Dye Stains

Need detergent wash and bleach as safe, for fabric.

- Cherry, blueberry
- Color bleeding in wash (dye transfer)
- Felt-tip pen (permanent ink-may not come out)
- Grass
- India ink
- Kool-Aid
- Mercurochrome
- Mustard
- Tempera paint

Dye stains are very difficult to remove. First, pretreat the stain with a heavy-duty liquid detergent, then rinse thoroughly. Soak the stained garment in a dilute solution of all-fabric powdered bleach.

If the stain persists, and the garment is white or colorfast, soak in a dilute solution of liquid chlorine bleach and water. Bleaching damage to colored garments is irreversible. To decide if a fabric can be bleached safely, use the test described previously. If the stain is not removed in 15 minutes, it cannot be removed by bleaching and further bleaching will only weaken the fabric.

Caution: Since bleaches can alter the color of a fabric as well as the stain, bleach the whole garment and do not try to bleach just a spot.

Combination Stains

Two step treatment: (1) Remove oily/waxy portion, (2) Remove dye portion using bleach as safe for fabric.

Combination stains contain a variety of ingredients, but these stains usually have an oily/waxy component and a dye or pigment component. Use the procedures recommended for removing oil stains first.

Step 1 procedure depends on whether stain is in Group A or B as follows:

Group A. Spray or sponge with drycleaning solvent (perchloroethylene, trichloroethylene) then rub with heavy-duty liquid detergent before washing.

- Ball-point ink
- Candle wax
- Carbon paper
- Carbon typewriter ribbon
- Crayon
- Eye make-up (mascara, pencil, liner, shadow)
- Floor wax
- Furniture polish
- Lipstick
- Livestock paint
- Pine resin
- Shoe polish
- Tar

Group B. Rub heavy-duty liquid detergent into stain before washing.

- Barbecue sauce
- Calomine lotion
- Catsup or tomato sauce
- Cocoa or chocolate
- Face make-up (powder, rouge, foundation)
- Gravy
- Hair spray

After you've done the procedures above, do step 2-removing dye stains. Start with an all-fabric bleach because it is less damaging to colors and fabrics. Use liquid chlorine bleaches for tough dye stains, if fabrics are colorfast to bleach.

What to Do if You Don't Know What the Stain Is

If you don't know what the stain is, its odor, location, and color may give you a clue. Old oil stains may smell rancid, but appear dry. Food stains are often on the front of

garments; perspiration stains around collars and underarms; black grease is often on pants or skirts at car-door latch levels.

Stain color may be a misleading clue. For example, rust-colored stains may be coffee, tea, old lemonade stains (carmelized sugar), cosmetics containing benzoyl peroxide (which can bleach many colors to look rusty), felt marker, crayon, aged baby formula, or a number of other things. If a heavy waxy or gummy residue is present, you may be dealing with a stain that will respond best to spot treatment with a drycleaning fluid.

Since the appropriate removal method varies with the stain, start by using the least destructive stain removal methods first. If the whole garment can be submerged, start by soaking the garment in cold water (as for protein stains). If not, use warm water and spot treatment technique. Next, use liquid detergent and lukewarm or hot water, rinse and let air dry (as for oil stains). If you suspect the stain is iron rust, treat with rust remover before bleach. If stain persists, use a pretreatment spray or solvent (as for combination stain) and all-fabric bleach. If the all-fabric bleach is ineffective on the stain and the garment is colorfast or white, finally try a dilute solution of liquid chlorine bleach.

Stains Needing Unique Treatment Methods

Chewing gum: Apply ice to harden gum. Crack or scrape off excess. Spray with pretreatment aerosol product. Rub with heavy-duty liquid detergent. Rinse with hot water. Repeat if necessary. Launder.

Deodorants: Apply liquid detergent, wash in warm water. Build-up of aluminum or zinc salts may be impossible to remove.

Fingernail polish: Do not use nail polish remover (or acetone) on acetate, triacetate, or modacrylic fabrics as they will dissolve. Take these fabrics to professional drycleaners and identify the stain. For other fabrics, use nail polish remover, acetone and spot treatment method.

Hog confinement odor: Wash clothes adding 1/4 to 1/2 cup household ammonia to wash load with heavy-duty detergent. Do not mix ammonia and bleach in same wash load. Toxic fumes are produced. Ammonia can be used on colored fabrics, but occasionally its use will change the garment's color.

Iodine: Iodine is quickly removed with sodium thiosulfate, which is sold in photo supply stores as "acid fixer." If the photo supply fixer solution contains other chemicals in addition to sodium thiosulfate, it should not be used. Iodine may also be removed by some commercial stain removers.

Lead pencil: Use art gum eraser to lift off excess; avoid hard rubbing. For delicate fabrics use spot treatment methods. For most durable, washable fabrics, spray with

pretreatment aerosol product. Rub in heavy-duty liquid detergent. Rinse in warm water. Launder.

Mildew: Mildew is a growing organism that must have warmth, darkness, and moisture to survive. Mildew eats cellulosic fibers, causing permanent damage and weakening of fibers and fabrics. To remove mildew: Shake or brush item outdoors. Pretreat darkest stains with heavy-duty liquid detergent. Launder in hot water with a heavy-duty detergent. Bleach as safe for fabric.

Odor: Most odors are removed by laundering. For persistent odor problems, place calcium carbonate crystals, activated charcoal, or soda in an open container and store with clothes in closet or sprinkle soda directly on fabric and let stand; then shake or vacuum.

Paint-latex: Treat while wet. Soak in cold water; wash in cool water with heavy-duty detergent. After paint has dried 6 to 8 hours, removal is very difficult. Treat as combination stain. Wash in hot water, Rinse. Repeat treatment.

Paint-oil-based: Treat while wet. Use thinner recommended for paint. Use spot treatment technique and thinner on spots until paint is softened and can be flushed away in heavy-duty detergent wash. Usually turpentine or alcohol will work as solvents.

Perspiration: Apply liquid detergent or soak in warm water with presoak product 15 to 30 minutes. Launder.

Pesticide: If full-strength liquid concentrate spills on clothes, handle only with rubber gloves. Discard clothing immediately. Laundering does not remove concentrate to a safe level for reuse of clothing. Launder other pesticide-contaminated clothing separate from general family laundry. If visible staining from diluted spray of pesticide residues remains after laundering, rewash using hot water, heavy-duty detergent, and a full water level. Then line dry.

Rust: Rust stains cannot be removed in normal laundering. Use of chlorine bleach makes them permanent. Rust removers such as RoVer or Whink are effective and safe for most fabrics, but rust removers that contain hydrofluoric acid are extremely toxic, can burn the skin, and can damage the finish on appliances. A solution of oxalic acid crystals in water will also remove rust stains, but it is often difficult to obtain the crystals.

Lemon juice and salt are more readily available and are helpful sometimes. Sprinkle the salt on the stain, squeeze lemon juice on it and spread the garment in the sun to dry. A word of caution: Lemon juice can bleach some colors and many washable garments are not manufactured to be colorfast to sunlight.

Scorch: Excess heat on cellulosic (cotton, linen, ramie, rayon), wool, or synthetic fibers can cause permanent damage. If fabric is thick and fuzzy, brush to remove charring. Rub liquid detergent into scorched area. Launder. If stain remains, bleach using all-fabric

bleach. Fabric will be permanently weakened in scorched area. Synthetic blends that are melted or glazed cannot be fully restored.

Smoke, soot: Shake off excess soot outdoors. Launder in washing machine using heavy-duty phosphate-based detergent or heavy-duty liquid as recommended by manufacturer, one cup of water conditioner, and 1/2 cup of all-fabric bleach. Use water temperature appropriate for fabric. Air dry. Inspect for smoke odor. Repeat as necessary. Three or four washes may be needed for cottons and cotton blends.

Urine: Rinse in cold water and launder. For stains on mattresses: (1) sponge with cloth using detergent solution, (2) rinse with cloth using vinegar solution, (3) let air dry, and (4) if odor remains, sprinkle with soda or calcium carbonate; wait 1 day, then vacuum.

Water Spots: Launder. For drycleanable draperies, consult a professional cleaner. Water marks on drapes are water soluble and not removable by drycleaning solvents.

Common Remedies to Avoid

Dishwasher detergent: Although sometimes suggested for food stains, these detergents are intended for use in closed dishwashers with very hot water. They are so highly alkaline they can irritate your skin if you use them in stain removal. They also may fade colors or damage wool, silk, or nylon fibers.

Hair spray on ball-point ink: Certain hair sprays are effective on ballpoint stains, but they may deposit a gummy residue and perfume that then have to be removed along with the ink. Hair spray also may affect color in some fabrics. Alcohol is a hair spray ingredient that is useful for removal of the oily part of the ball-point stain.

Ironing candle wax: Ironing candle wax between blotting paper will only drive the stain deeper into the fabric. This process is widely used, but it's not recommended because it will make any color from the dye of the candle more permanently set and the wax more inaccessible for the detergent or solvent to reach to carry the stain away.

Milk on washable ink: This doesn't remove the ink and gives you an additional protein stain.

Salt to make dyes colorfast: Today's dyes cannot be increased in colorfastness by soaking in salt water. If bleeding of a particular dye in cotton, rayon, or ramie fabric is decreased with a salt water soak, the effect will not be permanent. When the fabric is wet again, unless there is salt in the solution, the dye will be free to leave the fabric. Salt cannot affect colorfastness of synthetic fiber fabrics or their blends because they are dyed with dyes that have chemical structures not affected by salt.

Shampoo: Clear gel-like shampoos are sometimes suggested for stain removal. While they are usually not harmful to fabrics and may work on light oil stains, laundry detergents are just as effective and less expensive to use. Additionally, colored, opaque; or milky-looking shampoos may contain ingredients that will stain fabrics or foam so much that they are difficult to rinse out.

White vinegar: Vinegar (acetic acid) may weaken cotton, rayon, acetate, triacetate, or silk fibers and may cause color change. If used as a stain removal agent, test on a hidden seam allowance for colorfastness. Vinegar will not help remove or set creases in today's synthetic or permanent press fabrics, although this is a common belief.

How to Identify and Prevent Some Common Staining Problems

Greasy-looking fabric softener splotches: Use of fabric softener sheets in the dryer can deposit softener unevenly, causing greasy-looking splotchy stains on silk-like polyester and blends of cotton/polyester broadcloth. This problem is especially noticeable on medium-colored fabrics such as khaki and medium blue. Avoid this problem and control static by using a fabric softener that is added to the final rinse.

Odd colored or rusty looking stains on collars, sheets and pillow cases, bedspreads, towels, or wash cloths: These stains are often caused by the benzoil peroxide used in cosmetic products (including acne medicine). This chemical acts as a bleach, is very insoluble and hard to rinse off the body. It can permanently change colors of some dyes. The damage cannot be remedied, So it should be prevented. When products containing this chemical must be used, white collars and household textiles may be a good choice.

Stiff, coarse textures and/or dull colors in freshly laundered fabrics: Nonphosphate granular detergents can combine with hard water to leave behind a residue that can cause fabrics to become stiff and feel harsh. Avoid the problem by using a phosphate-based detergent, a heavy-duty liquid detergent or a nonprecipitating water conditioner with the nonphosphate granular detergent. Soaking stiffened clothing in a solution of white vinegar and water (1 cup vinegar per gallon of water) may help restore them, however you should first test clothing for colorfastness to vinegar on a hidden seam allowance. Another way to restore this clothing is to treat as for yellow, gray, or general discoloration.

White powdery streaks on dark clothes: Powdery streaks on dark clothes are probably caused by undissolved detergent being incompletely rinsed out. Some nonphosphate detergents can deposit mineral hardness residue that shows as streaks. Avoid this problem by changing detergents or by adding detergent to the wash water first, then adding clothes and starting washer. Usually a repeat rinse and spin cycle with clear water will remove these streaks.

White streaks on blue jeans: White streaks on blue jeans are probably not caused by undissolved detergent. Blue jeans are often dyed with indigo dye, which is a fugitive dye that bleeds in a water solution. As the washer spins, the edges where the fabric is folded get more abrasion and rougher treatment, causing the color to escape. Turning jeans wrong side out before laundering will reduce these white streaks and give more even fading. To avoid the natural fading that accompanies use of indigo, look for polyester/cotton jeans that are labeled colorfast. They will retain their dark blue.

Yellowing, graying, or general discoloration: This condition occurs when insufficient detergent is used for proper cleaning, wash water temperature is too low (especially for oil stains), too much detergent is used and insufficiently rinsed out, synthetics are washed with a light-duty detergent in cold water, or color is transferred from other non-colorfast items in the wash. To refurbish clothing with this discoloration, wash in a permanent press cycle with hot wash water, a cool-down rinse, and a cup of water conditioner instead of detergent. If discoloration persists, repeat this procedure or wash again using the correct amount of detergent, an all-fabric bleach, or diluted liquid chlorine bleach if safe for fabric.

The treatment of last resort for white items is treatment with a commercial color remover (Rit or Tintex). This reducing bleach must be used very carefully, as it will easily fade colors in any fabric it touches.

If the yellow color is on silk, wool, or spandex it may be a result of fiber alteration due to improper use of chlorine bleach and is not removable.

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