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### Carpets – Soiling and Cleaning

Cooperative Extension South Dakota State University

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# Carpets - Soiling and Cleaning

Cooperative Extension Service  
South Dakota State University  
U.S. Department of Agriculture





# Carpets - Soiling and Cleaning

By: Carol Jo Thompson, Extension interior design and equipment specialist

Color is often the main reason for selecting a particular carpet. The color may match the draperies, upholstery or other decor, but remember, the soil or dirt tracked onto the carpet can hide this color. So when selecting a carpet and its color, consider the type of soil that will be tracked onto it, and how you plan to care for it.

Throughout the United States, soil varies widely in color. White, sandy soil, black or brown humus, red clay, oily-greasy industrial soil, black soot from cities or barnyard soil will all have different effects on the color of a carpet.

Soiling conditions will vary in a city. There will be much black carbon soil downtown, and sections downwind from industrial areas will have a special type of soil. Lawns covered with grass won't soil carpets as quickly as dusty playgrounds.

Even in a home, different soiling conditions are found. Food oils and greases drift from the kitchen, but petroleum oils and greases will be tracked in from the carport or garage. Entrance areas may become deeply soiled, but very little soil would be tracked into a back bedroom, especially after walking through other carpeted rooms.

Most people are not interested in matching the color of soil with their carpets. But, consideration should be given to the type and color of soil that will be brought in. By breaking up the plainness of the carpet surface, the soil won't be as noticeable. Multicolor, high-low pile and random sheared carpets all hide soil better than a uniform height, solid color carpet.

## Caring for Your Carpet

The better care you give carpets and rugs in your home, the longer they will last and retain their good looks. There are three basic rules for home cleaning that will keep your carpeting in optimum condition.

1. Vacuum traffic areas daily. This removes tracked-in soil and restores the pile. Dirt left on the carpet will go below the surface, where it's more difficult to remove and can wear carpet fibers by abrasion.

2. Vacuum all carpeting thoroughly once a week. Get under furniture and into corners. "Thoroughly" means the vacuum cleaner should be pushed and pulled in slow even strokes until dirt is removed. Vacuuming does not hurt rugs; it actually prolongs their life.

3. Remove any spots and stains as quickly as possible. For best results, don't wait until they have time to dry or set. Many spots can be removed easily with a damp sponge and detergent. The longer you wait, the more likely your carpet stain will be permanent.

The decisions a family makes regarding carpet care depends on the amount and quality of the

carpeting, as well as the regular wear and tear a carpet gets. A retired couple or person living alone will not have the same maintenance needs as a family with several children and/or pets. Carpets in major traffic areas always need more care than those in seldom used areas.

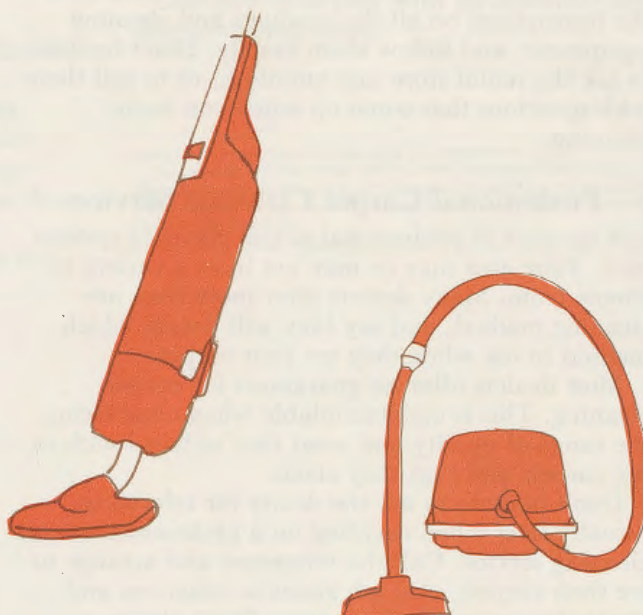
A periodic examination of the carpet pile should be made to see if loose soil is being removed. The number of strokes over the carpet pile, which are needed to remove loose soil, will vary with the height and density of the carpet pile.

## Carpet Care Appliances

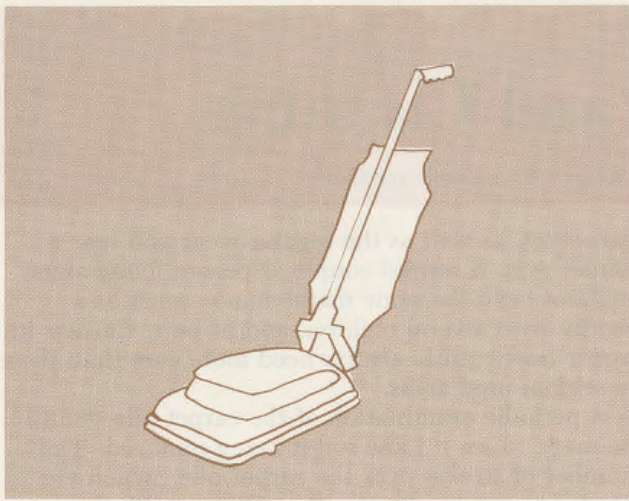
Carpet sweepers are light, easy to maneuver and simple to use, since there's no electrical cord to plug in. They're handy for quick cleanups and are adequate when it comes to removing surface litter from carpets. They do not work on bare floors.

The light-weight vacuum cleaner or electric broom is faster and more efficient than the carpet sweeper. It weighs about 10 pounds less than the standard upright, and is excellent for removing surface litter between regular cleaning. Most lightweights have an adjustable brush, letting you clean bare floors or carpets. All lightweights depend on suction for their cleaning ability.

A canister type vacuum cleaner has better suction than the lightweight. Daily vacuuming with the canister, as with the electric broom, only gets at surface dust and litter. The deep-down dirt left behind can cut carpet fibers and shorten its life. A powered, rotating brush attachment, available on some models, converts the canister into a deep cleaner similar to an upright.







Regular vacuuming with an upright machine, which has motor-driven brushes and beater bar, is essential to loosen soil and remove it from the carpet.

### Rental Equipment

There is a variety of carpet cleaning equipment available on a rental basis. The major types include:

1. Rotary dual-brush upright which uses wet shampoo.
2. Soil extraction machines (steam cleaning).
3. Dry cleaning with auxiliary dual-brush machine.

Variety stores, drug stores, paint stores, local hardware stores or a rent-all store may have rental units. The machine usually rents for so much per 24 hours, plus the purchase of a container of rug shampoo. A 24-ounce container will clean approximately 360 square feet.

Be sure the machine and brushes are clean and in good working order. Rent from a store that gives helpful answers to your questions; some persons renting these machines are knowledgeable about their use, others only know how to rent the machine. Be sure directions for using the machine are available for your use at home. Carefully read the instructions on all the products and cleaning equipment, and follow them exactly. Don't hesitate to ask the rental store any questions, or to call them with questions that come up when you begin cleaning.

### Professional Carpet Cleaning Services

A number of professional carpet cleaning systems exist. Your area may or may not have a variety to choose from. Many dealers offer more than one cleaning method, and say they will decide which method to use when they see your carpet.

Most dealers offer no guarantees for carpet cleaning. This is understandable when considering the range of quality and wear they're faced with in the carpets and rugs they clean.

Don't hesitate to ask the dealer for references (usually five) when deciding on a professional carpet cleaning service. Call the references and arrange to see their carpets, and ask about satisfactions and dissatisfactions with the service. Don't choose a

professional carpet cleaning service blindly. Insist that the dealer start in an inconspicuous area to see how your carpet is going to react to their product.

Most in-home professionals in eastern South Dakota charge around 12 cents per square foot. It will vary in different areas. The charge for stairs is more—around 70 cents per stair—because stairs are more difficult to clean and maneuver. Some companies charge specific rates for a room. Most in-home cleaners charge the same fee for all types of carpets. Oriental rugs and braided rugs usually cost more, because they're reversible. Some charge extra to clean shag carpet.

Even with maximum care, your carpet will eventually tend to look dull. This does not mean the colors have faded—it's probably caused by a gradual build-up of soil, which has been difficult to remove by vacuuming. When this is noticeable, your carpet needs shampooing.



### Pre-cleaning

Whether you use a professional cleaner or a do-it-yourself method, always start the cleaning process in an inconspicuous spot, and check the results before proceeding. Improperly installed carpets may shrink or buckle, and some carpets may not be colorfast. Starting in an inconspicuous spot gives you a chance to call a halt to an inappropriate method of cleaning, before your carpet is ruined.

Follow these procedures for safe in-home carpet cleaning:

1. Pretest the cleaning solution to determine the type of residue that will remain on the carpet. Put a small amount of shampoo in a container and let it evaporate. What's left in the container will also be what's left in your carpet.
2. Remove as much furniture as possible from the area to be cleaned.
3. Pin up floor length drapes.
4. Vacuum carpet thoroughly.
5. Ventilate the room well for faster drying.
6. Spots or stains must be treated before cleaning. For spills known to be water-soluble, a detergent solution is the best cleaning agent. For oil-



based stains, a solvent such as a dry-cleaning fluid is usually effective.

7. Follow all instructions carefully.
8. Do not over-wet the carpet.
9. Wait until the carpet is fully dry before vacuuming. Home vacuum cleaners were not designed for wet pick-up and you could get shocked.
10. If you must replace the furniture before the carpet has fully dried, place aluminum foil, plastic, or wax paper under each chair and table leg to prevent rust marks.

The best cared for carpet will eventually need the revitalizing that only shampooing or drycleaning can provide. There are basically two types of cleaning systems--dry and wet. The dry systems contain dry cleaning solvent; the wet systems use water.

The effectiveness of any product or machine depends not only on the chemical or mechanical makeup, but also by how it's used. Most methods will work if used properly. No method works by magic. Use the principle of cleaning best-suited to the soil to be removed, and follow instructions.

### Dry Cleaning

Dry cleaning involves vacuuming the carpet to be cleaned, and then spreading on a compound consisting of either millions of tiny, soft plastic sponges dampened with solvent, a detergent-saturated sawdust or another inert material. This compound is hand-brushed or worked into the carpet with a double-brush machine. The solvent dissolves oils and greases and frees the oil, which is then absorbed by the granules, and removed with the vacuum. When completely dry, the carpet is vacuumed again, preferably with an upright vacuum. Two light applications can be used for heavily soiled areas. This method is most successful when 3 or 4 square yards are cleaned at a time.



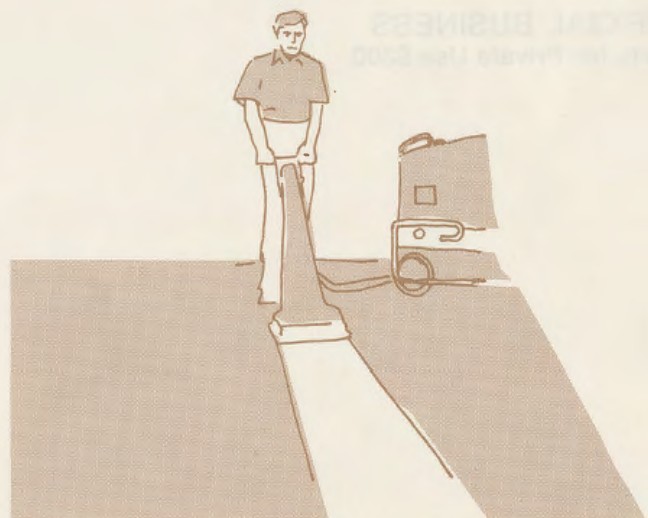
The dry cleaning method eliminates the possibility of over-wetting a carpet, and is especially effective in removing greasy soil. Dry cleaning is the least likely method to affect the carpet pile, and dries the fastest of any method.

The major drawback of dry cleaning is the inaccessibility of renting the compound and machine. Using this method without a good vacuum cleaner often proves hazardous because the compound cannot be totally picked up. This method is not recommended for use on any shag carpet.

### Soil Extraction Machines (Steam Machine Cleaning)

A few years ago, a machine was developed to re-dye upholstered furniture in a plant. The machine used boiling water for better dye penetration, and it was observed that the steam-laden water produced cleaning. The machine was then used to clean rugs in the plant, and was finally adapted for home use. Today's machines don't produce true steam, but the name carried over from the original furniture-dyeing machine.

Many of today's machines have no heaters in them, and the cleaning solution temperature is determined by the water temperature. Increasing the temperature of the cleaning solution will increase soil removal. Even though the solution in the tank is hot, it may increase the temperature of the carpet only a small amount. The solution passes through hoses from the solution tank to the cleaning wand, and is then blown into the pile in a vaporized form; almost immediately 80-90% of the solution is removed from the carpet by a vacuum. Each of these steps reduces the temperature of the solution. A more accurate term for this method of cleaning is "hot water extraction."



Hot water extraction will remove a large amount of soil at a relatively low cost. The larger the area cleaned, the lower the cost per square foot. On deeply soiled carpet, some mechanical brushing action may be necessary. Several machines have a brush attachment or a shampoo machine may be used first. Little or no texture change occurs in carpets cleaned by this method.

Because a large amount of solution is applied in a short period of time, it has to be used with care. The most undesirable feature of this type of machine is its bulk. Many people find they need a helper for pick-up and return to the rental store.

### Rotary Brush Upright--With Wet Shampoo

One of the oldest mechanical carpet shampoo methods, the rotary brush method, is also the most commonly seen. These units are available in single or dual-brush models. Some can also be used to clean and polish hard surface floors. The machines





are lightweight and will easily fit into the smallest car. The cost is a little more, but the machine is much faster and less tiring than the hands-and-knees method. The rotary brush method gives a good surface to most carpet. On a deeply soiled carpet, the mechanical action of the brush may be required to loosen the soil.

Since the foam dispensed is very slight, there's a tendency to release more solution than necessary, which oversoaks the carpet. Vacuum the carpet as soon as it is thoroughly dry. Some manufacturers recommend using a cold water extraction after rotary brush shampoos to thoroughly remove the shampoo.

The action of the brush may produce pile distortion, especially in the hands of an unskilled operator. Carpets with a long pile, soft yarn twist or low density are more likely to have a texture change.

Machines that have stubby, plastic bristles are harder to clean than those with hair-like bristles.

### Cylindrical Brush—Dry Foam

In this method, the machine has a generating system that evenly distributes a foam shampoo on the carpet. The agitation is supplied by a cylindrical-type brush, which works the foam into the carpet. Soil removal is most effective if you vacuum immediately with a wet vacuum. Using the foam as a cleaning agent shortens the drying time, and speeds the carpet shampooing process.

Because the cylindrical action is less vigorous than the rotary method, dry foam cleaning isn't as effective for deep cleaning. It is an effective surface cleaner, and is often used where carpets must be returned to service in a short period of time. It can cause pile distortion and flaring of carpet tufts.

### Hands-and-Knees

Mix your own homemade rug shampoo using 2 heaping teaspoons of dish detergent (not soap) to one

gallon of water, or buy a can of rug shampoo, aerosol foam or whatever you choose. Carefully follow all label directions. The label often shows a homemaker using a sponge mop, sedately shampooing the rug in a standing position. Unless your rug is scarcely soiled, it's difficult to apply enough pressure in this position to do a satisfactory job.

Be careful not to soak the rug. Use the foam which, if you're not using an aerosol spray, can be worked up with a sponge or blender. Apply to a small area at a time; then sponge at right angles in the same area.

The biggest plus of the hands-and-knees method is the low cost. It's a slow, tedious method for large areas, but it can be done. Don't forget to vacuum before starting, and again after your rug is completely dry. If the rug or carpet is badly soiled, this method probably won't be too effective.

### Anti-static Finishes

If your carpet doesn't have built-in static control, there are two methods for reducing static charges in the carpet. One is to introduce moisture into the air, and the other is to apply an anti-static agent to the carpet.

A carpet with a permanent, mill-applied anti-static finish is said to be easier to keep clean. This is possible, because it doesn't attract air-borne dirt as readily. However, some of the applied anti-static agents cause dirt to adhere to a carpet. Always consult your dealer or a professional carpet cleaner before applying any anti-static agent to your carpet.

### Fluorochemical Finishes

A fluorochemical finish shields carpet fibers from staining and soiling. It's claimed that carpets protected with these finishes stay clean two or three times longer than a similar untreated carpet. These finishes are applied at the carpet mill and should hold up through several cleanings. How long the finish will remain effective depends a great deal on how the carpet is used and cared for.

Several cleaning products are on the market which have fluorochemicals in their makeup. Using these products is said to renew the soil resistance of your previously treated carpet or add soil resistance to an untreated carpet.

### Care for Kitchen Carpets

Kitchen carpet cannot be neglected if it's to retain its beauty. It should be gone over daily with a carpet sweeper or lightweight vacuum. Any spots not removed by vacuuming should be sponged off immediately with a detergent or dry cleaning fluid, depending on the soil. Stains are handled just as with any carpet. Spills should be blotted up immediately. When the carpet has dried, vacuum it to raise the nap and remove any remaining residue.

Occasional dry cleaning and thorough cleaning two or three times a year with a rug shampooer are recommended.

In case of a burn accident, place a scrap of the same carpeting over the burned area, being careful



to match the pattern. With a cutter, cut through both layers of carpet; remove the damaged piece and glue the new piece in place.

### Carpet Care Reminders

1. Don't pull out a tuft or knot if it comes loose. Clip it off even with the pile.
2. New rugs or carpets go through a shedding period. A number of cleanings may be necessary before this shedding stops.
3. Keep all carpet and rug labels, so you have a record of their fiber content and care methods. This data may be very useful at some future date.
4. Casters or glides will help keep pile from being crushed by heavy furniture.
5. Never drag furniture across carpeting; lift it when moving.
6. Steam will help restore pile when crushed by furniture pieces. After applying steam, use the vacuum to lift the pile.
7. Rugs last longer if the wear is evenly distributed. Use area rugs in heavy traffic areas, rearrange furniture or turn rugs periodically to alter wear patterns.
8. Never run a lamp cord beneath a rug or carpet. This is a fire hazard, and will create a worn ridge in the rug.

The National Institute of Rug Cleaning gives the following cleaning cautions:

Don't use ammonia, ammonia compounds or other strong alkalies (such as wall cleaners or floor cleaners) for shampooing rugs and carpets. Ammonia and other strong alkalies may cause bleeding of dyes and damage to wool fibers.

Don't use soap on rugs. Soap leaves a film which attracts fresh dirt, and rugs will have a rapid resoiling rate. For quick treatment of spills in the home, a neutral detergent should be used.

Don't beat rugs. This old-fashioned method of cleaning may break the backing of your rug. Shaking or snapping small rugs may have the same effect.

### Stain Removal

Because there are so many different types of fibers and dyes (one company alone makes over 70 different nylon carpets) it's risky to state "use this method of stain removal." Different fibers, various dye methods and a difference in dyes contained in spilled products will all have a different effect on the stain removal method. For this reason, a stain removal chart isn't as valuable today as it was in the past.

Some simple stain removal guides follow. If you're in doubt about what action to follow for a stain, contact your carpet dealer or cleaner to ask what they recommend.

#### Water Based Stains

Blot spill immediately.

Apply detergent\* and vinegar solution:

1 tsp. detergent\*

1tsp. white vinegar

1 qt. water

Rinse and blot dry.

Apply solvent spot cleaner, let dry.

Repeat if necessary.

Brush pile.

#### Oil Based Stains

Blot spill immediately.

Apply solvent spot cleaner.

Blot dry.

If necessary, apply suds of detergent\* solution above.

Rinse and blot dry.

Repeat steps if necessary.

Brush pile.

#### Animal Stains

Blot liquid immediately.

Apply several applications of clean, lukewarm water.

Apply vinegar/water solution:

1 tsp. white vinegar

1 tsp. lukewarm water

Blot and allow to dry.

If stain remains, apply detergent\* solution above.

Blot dry.

Reapply vinegar solution and allow to remain for about 15 minutes.

Blot and allow to dry.

This works sometimes, but if a color change has occurred, a professional will have to be called to see if it's possible to redye the rug to restore its appearance. Several commercial products are available for use on animal stains. Once an animal stain has set, it's nearly impossible to remove it.

\* Choose a detergent with no additives such as bleach or brighteners.

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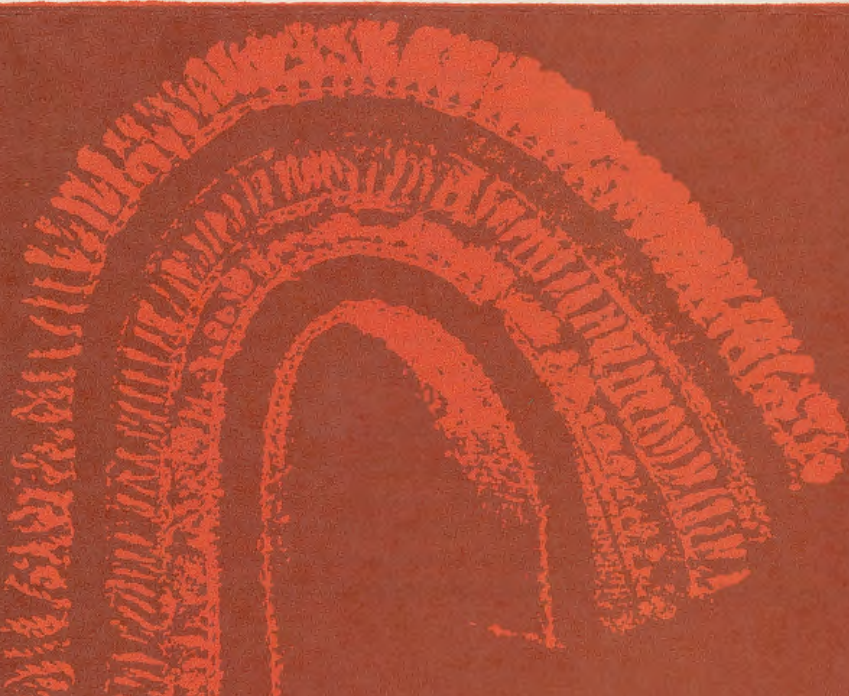
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