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# WISE UP on the WHY'S

## of some CLOTHING CARE PROBLEMS

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Consumers are constantly being reminded to follow the care recommendations on garment labels and hangtags and also clothing care instructions in their laundering equipment manuals.

Knowing the reasons for such recommendations may help you to understand:

**WHY** some clothes seem to soil more quickly and need laundering more often —

**WHY** stains, especially oily or greasy ones, are difficult to remove —

**WHY** low to medium water temperatures and small laundry loads are recommended —

**WHY** laundry loads should be separated by color and by degree of soiling.

**Today's clothes are generally easy to care for, but they seem to need washing more frequently because:**

Many fabrics are made partly or entirely of non-absorbent synthetic or man-made fibers. Such fibers, unless treated, have high static electricity which attracts soil and holds it to the surface of the fabric, as well as causing clothes to cling. The dark "ring around the collars" is an example of oily soil attraction.

Soil on fabrics of non-absorbent fibers (the polyesters and nylons, for example) tends to stay on the surface and show up more, rather than become imbedded within the fibers where it would be less noticeable.

Anti-static fabric finishes help retard soiling, as well as prevent static shocks and fabric clinging; but they do tend to become less effective through successive launderings. New developments show promise, however.

Anti-static additives are now being incorporated within fibers. The new anti-static finishes also alter the fiber itself, rather than merely change the fabric surface. Some examples of current trademark names are Antron III, Stataway, FNS (forever non-static).

**CUE**  
**for**  
**Consumers**

*The "wash after each wearing" or "do not allow garment to become heavily soiled" cautions on labels are intended to prevent a build-up of soil which eventually can become difficult, even impossible, to remove. Grayed whites, dulled and dingy colors are the result.*

*Purchase clothing which is labeled with indications of durable anti-static treatment.*

**Today's fabrics are generally easy to care for, but a particularly persistent problem is removing stains, especially oily type stains, e.g., body oils, because:**

Many of today's fabrics are made partly or entirely of synthetic fibers which have an affinity for oily stains, even though they do not absorb other surface soil or water-borne stains.

The resin finishes on today's fabrics, such as wrinkle-resistant finishes, wash-wear finishes, and especially durable press, react the same way to oily type stains.

Some spot and stain resistant finishes have an oil-like chemical composition which coats the fabric or yarns, thus creating a resistance to water-borne stains. That same composition can hold oily or greasy type stains, however.

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Consumers

*Frequent washing of today's fabrics will prevent the build-up of soil from body oils, hair and cosmetic oil-based preparations which, if left in the fabric, will be difficult or impossible to remove.*

*Prevent greasy soil build-up on necklines and sleeve cuffs by applying full-strength, liquid laundry detergent or concentrated hair shampoo to the soiled areas and letting it penetrate for 15 to 20 minutes or more before washing.*

*Remove oily or greasy spots before washing, because they can be permanently set by the heat during laundering. If possible, blot up such a stain right away. Then, using safety precautions and proper ventilation, dissolve the stain with a dry cleaning fluid before laundering.*

**Getting clothes clean is important, but so is little or no ironing, to most people. Laundering temperatures and laundry load size affect how a garment's original appearance is maintained without further ironing because:**

The heat sensitivity of the synthetic fibers in many of today's fabrics allows wrinkles to be set in by washing and/or drying temperatures.

Synthetic fibers, e.g. nylons, polyesters, acrylics, are described as *thermoplastic* in that they can be softened or "melted" at relatively low temperatures.

Most laundry water temperatures won't actually melt synthetic fibers, but can soften them enough to put wrinkles in them. When such fabrics are subjected to compression and twisting in the presence of heat during washing, wrinkles can literally be pressed into the fabric.

The thermoplastic-based resin finishes used on cotton or fiber blends of wash-wear and durable press clothing and household textiles are also heat-sensitive and subject to wrinkling when laundered at high temperatures.

Wrinkling is likely to be severe if a dryer is used at high heat levels with no "cool down" period at the end of the drying cycle, or for prolonged periods.

Too high heat can soften the creases of trousers and pleats which have been previously heat-set into clothes made from thermoplastic fibers. Thus, they may need hand pressing to resharpen crease lines. As moisture is evaporated, machine drying has the

greatest effect on heat sensitive or thermoplastic fabrics.

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for  
Consumers

*Even though the thermoplastic fabrics are heat-sensitive, generally there is great variation in the degrees of heat they will tolerate before "softening" and wrinkling easily.*

*That's why more and more labels and hangtags refer to washing, drying, or pressing temperature settings, such as "synthetic," "wash-wear," "permanent press" settings, etc.*

*Recommendations often refer to "moderate" temperatures which provide a safe range of appropriate temperatures for the wide range of heat tolerances of thermoplastic fabrics. Moderate temperatures will be high enough to eliminate the wrinkles put in by wear, but not too high to remove any pre-set pleats and creases.*

*Smaller washing loads and smaller drying loads will lessen fabric compression and help to prevent wrinkling.*

*Avoid prolonged washing, extracting and drying periods in which clothes can become compressed, dried and thus over-wrinkled in laundering.*

*Remove dried clothes immediately from the washer and/or dryer to avoid unnecessary wrinkling.*

**Today's clothes generally require less care, but keeping whites WHITE and colors BRIGHT or CLEAR throughout care is difficult because:**

Some synthetic fibers, especially nylons and polyesters, have a tendency to pick up color from other colors in a wash load. Therefore, they are called color scavengers, even though their low absorbency makes them difficult to dye.

The static potential of synthetic fibers causes them to attract soil which has been released from dirtier fabrics within the same wash load. Soil released into the wash water can actually redeposit on fabric surfaces although detergents do have anti-redepositing agents.

Much of today's clothing is made to look extra white or very bright-colored by the use of fluorescent dyes and brighteners which are not necessarily permanent.

Some of these fluorescent dyes are very sensitive to bright light. Clothes can turn from very white to quite yellow when exposed to direct sunlight. Usually there is no successful way to revert a garment back to its original white color.

Such brighteners or whiteners may gradually deteriorate or break down throughout drycleaning, and/or washing. The high alkaline quality of some detergent products or substitutes, as well as bleaches and even steam ironing, may cause further color breakdown.\*

"Delicate" fabrics can be yellowed, faded and even weakened by the high alkaline content in heavy-duty laundry detergents. The strong cleaning power of such highly alkaline detergents (called "built" detergents) is often necessary for washing heavily soiled grease stained work clothing, however.

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*To help keep whites "white" and colors "clear", wash white clothes separately from colored clothes. Wash lightly soiled clothes separately from heavily soiled clothes.*

*Clothes with high fashion colors, especially prints, often require special handling, such as gentle hand-washing in warm (not hot) water and hanger-drying.*

*Sometimes a label will say "DO NOT DRYCLEAN" because the dyes used are soluble in drycleaning solvents.*

**The original appearance of some of today's clothing is affected by the formation of balls of fiber fuzz (pills) on the fabric surface and by the attraction to lint during laundering because:**

The high static characteristic of synthetic fibers cause fiber ends to work their way from within a yarn formation to the surface of a fabric. Once on the surface, the fiber ends attract lint and soil from the air.

Pilling is a particular problem with nylons and polyesters because their strength enables the fiber pills to cling and remain on the fabric surface.

The friction of abrasion on a fabric can break fibers and cause the fiber ends to project on the surface and eventually pill, especially with yarns made up of staple (short length) synthetic fibers.

Some man-made fiber yarns are engineered for resistance to pilling. Anti-static additives within synthetic fibers, yarn texturization and absorbent finishes may help to resist fabric pilling.

Pilling is difficult to correct except by using some safe mechanical means to remove the pills

without harming the fabric. The pills will keep on forming, however.

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*Wash and dry clothes which tend to pill inside out so that the outside of the fabric is not subjected to so much surface abrasion during laundering.*

*Less packed and less full laundry loads will prevent compacting and abrasion of clothes.*

*Use a fabric softener in the final rinse to somewhat decrease the static characteristic of the fabric.*

### IT'S YOUR CHOICE

The apparent increase in proportion of synthetic fibers used in today's fabrics influences care methods required for optimum cleaning and maintenance of original appearance. The increasing use of 75 to 80 percent polyester in blends is an example.

Some attention to frequency of laundering, size of laundry loads and laundering temperatures will help to retain the original appearance of clothes and get them clean. You may have to "trade-off" one advantage for another, however.

### For Example

Hot water may clean heavily soiled clothes better, but at the expense of greater wrinkling which may require ironing.

Smaller washer and dryer loads help to prevent wrinkling, but you may be more concerned about saving time, energy, water and utility bills.

Separating wash loads by color and degree of soiling will help to keep original color appearance, but you may not want to separate wash loads to that degree.

You must decide how important this is to you in relation to:

- Your own available time and energy —
- Your own interest and commitment to clothing care —
- Your equipment and cost of utilities —
- Your own interest and commitment to water quality and conservation.

\*For further reference see: TODAY'S DETERGENTS, MSU Extension Home Management Project bulletin available from Home Management Specialists, Room 103 Human Ecology, Michigan State University, E. Lansing, Mich. 48823.

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# CONSUMER CARE GUIDE FOR APPAREL

This Guide is made available to help you understand and follow the brief care instructions found on permanent labels on garments. Be sure to read all care instructions completely!

WHEN LABEL READS:	IT MEANS:
Machine wash	Wash, bleach, dry and press by any customary method including commercial laundering and dry cleaning
Home launder only	Same as above but do not use commercial laundering
No Chlorine Bleach	Do not use chlorine bleach. Oxygen bleach may be used
No bleach	Do not use any type of bleach
Cold wash Cold rinse	Use cold water from tap or cold washing machine setting
Warm wash Warm rinse	Use warm water or warm washing machine setting
Hot wash	Use hot water or hot washing machine setting
No spin	Remove wash load before final machine spin cycle
Delicate cycle Gentle cycle	Use appropriate machine setting; otherwise wash by hand
Durable press cycle Permanent press cycle	Use appropriate machine setting; otherwise use warm wash, cold rinse and short spin cycle
Wash separately	Wash alone or with like colors

## MACHINE WASHABLE

WHEN LABEL READS:	IT MEANS:
Hand wash	Launder only by hand in luke warm (hand comfortable) water. May be bleached. May be drycleaned
Hand wash only	Same as above, but do not dryclean
Hand wash separately	Hand wash alone or with like colors
No bleach	Do not use bleach
Damp wipe	Surface clean with damp cloth or sponge
Tumble dry	Dry in tumble dryer at specified setting -- high, medium, low or no heat
Tumble dry Remove promptly	Same as above, but in absence of cool-down cycle remove at once when tumbling stops
Drip dry	Hang wet and allow to dry with hand shaping only
Line dry	Hang damp and allow to dry
No wring No twist	Hang dry, drip dry or dry flat only. Handle to prevent wrinkles and distortion
Dry flat	Lay garment on flat surface
Block to dry	Maintain original size and shape while drying
Cool iron	Set iron at lowest setting
Warm iron	Set iron at medium setting
Hot iron	Set iron at hot setting
Do not iron	Do not iron or press with heat
Steam iron	Iron or press with steam
Iron damp	Dampen garment before ironing
Dryclean only	Garment should be drycleaned only, including self-service
No dryclean	Use recommended care instructions. No drycleaning materials to be used.

## NON-MACHINE WASHING

## HOME DRYING

## IRONING OR PRESSING

## MISCELLANEOUS

