

FACT SHEET

CLOTHING TIPS FOR ENERGY SAVERS

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Clothing habits and practices can conserve energy. The clothing industry is sensitive to the energy issue and is creating fashionable garments and practical textiles with built-in energy conservation.

Dress Comfortably For the Environment

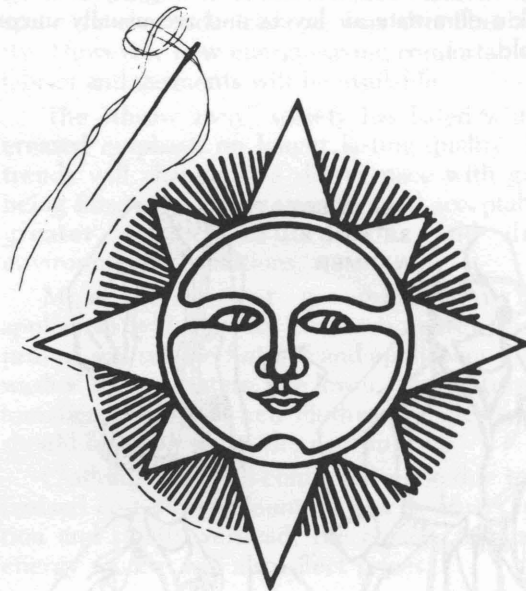
Dressing comfortably is important, whether for the occasion, individual taste, current fashion or the climate. Sometimes one phase of comfort is more important than another. For example, a cheerleader may be uncomfortably cold in her uniform due to the weather and yet at the same time be comfortably identified with the activity. Also, with increased mobility, it is no longer uncommon to plan ahead to be comfortably dressed when traveling in extremely different climates.

What is physically comfortable to one person may not be to another. Age, sex, body size, exercise and eating habits as well as adjustment to the climate are some of the factors which affect body temperature and comfort.

With buildings often being kept warmer in the summer and cooler in the winter, dressing for physical comfort has become more important. Families can also adjust home temperatures and the clothes they wear to feel physically comfortable while reducing energy costs.

Clothing works with the body and the environment to control physical comfort by forming air layers or pockets. This helps to keep a hot environment from overheating the body or a cold environment from over-cooling the body. Clothes also cool by conducting heat and moisture away from the body or warm by holding heat in. Clothes can form a protective shield against the environment. Clothes that are warmer or cooler depend upon a combination of the fiber content, color, fabric type, finishes, garment design and fit, accessories, cleanliness and dryness. For example, replacing a skirt with pants will warm the body 1.5°F (1°C) while adding a heavy long-sleeved sweater adds 3.7°F (3°C).

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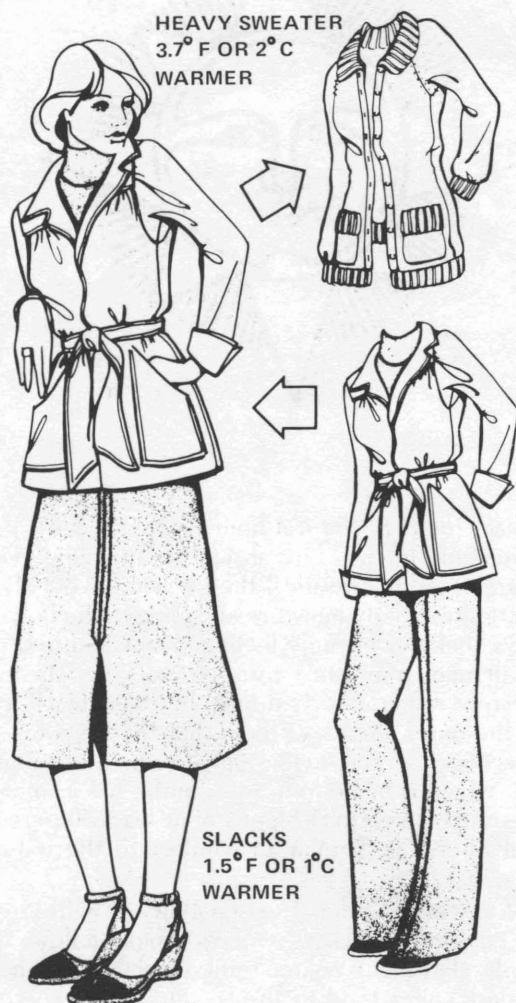
Fiber Content. Natural fibers — particularly cotton, wool and linen — are absorbent and allow body moisture to evaporate until they become wet. Many synthetics trap body moisture and cling to the body to create a sticky or clammy feeling. Some synthetic fibers will take up moisture through “wicking.” Instead of moisture being absorbed into the fiber, it will run along the outer surface. Fibers that tend to wick include acetate, acrylic, nylon, polyester and triacetate. Rayon, which is made from wood pulp, has a comfort factor similar to cotton. Blends of at least 50 percent natural fibers are similar in comfort to the natural fiber.

Color. The traditional seasonability of light “summery” colors and darker “wintery” colors follows the principle that light colors tend to reflect sunlight while dark colors tend to absorb sunlight.

Fabric Type. How a fabric is made contributes to its insulating qualities. Thicker fabrics, tight weaves or knits or fabrics made from textured yarns provide more insulation to trap air near the body. Thinner, more open fabrics are cooler because they let air escape.

Finishes. Certain functional or decorative finishes such as waterproofing and durable press reduce the fabric's ability to breathe. Other finishes can make a fabric more comfortable by adding absorbency, weight, crispness, softness, smoothness or a napped or brushed surface.

Garment Design and Fit. Layers of garments that cover the body and are close fitting at normal openings such as the neck, waist, wrist and ankle are warmer because they prevent cold air from reaching the body. Loose fitting garments that allow air circulation are cooler. Clothes that fit too tightly or cling to the skin eliminate air layers and are usually uncomfortable.



Accessories. The functional quality of accessories becomes important when keeping cool or warm. A high percentage of all body heat is lost through the extremities, especially the head. Hats can shade the head from sun or cover the head for warmth. For added warmth, accessories should snugly cover exposed skin; extra layers of further controlled garment fit (such as belts) also add warmth. For added coolness, accessories should be loose and kept to a minimum.

Cleanliness and Dryness. Water in fabrics chills the body while dirt clogs the fabric's breathing ability. Clean, dry clothes keep the body warmer. Fabric thickness can be reduced by repeated washings or can be matted down by wear or dirt, both of which reduce warmth.

Energy-Saving Clothing Care Tips

- Remove small and isolated spots and stains to cut down on laundering and drycleaning.
- Carefully read recommended care labels. Proper laundering and drying procedures often eliminate or cut down on pressing. Besides wasting energy, overdrying can cause static electricity, wrinkling or shrinkage.
- When possible, wash and dry full loads, adjust water levels for smaller washer loads and use the shortest machine cycle to do the job.
- Choose fabrics with soil release finishes for garments that are usually heavily soiled.
- Plan use of high energy consuming appliances. Drying loads of clothes consecutively and pressing or ironing garments at one time can cut back on energy used to reheat a cold dryer or iron. Also, since it takes several minutes for an iron to cool, turn it off about five minutes before you are finished.
- Keep the dryer's lint filter and outside vent clean and unblocked.
- Select a cold rinse temperature and cold (80°F or 25.5°C) or warm (100-110°F or 37.7-43.3°C) wash temperature for moderately to lightly soiled garments. Energy consumption can be reduced as much as fifty percent by using warm water for washing and cold for rinsing. Hot water (130°F or 70°C plus) requires energy to heat but is needed to clean heavily soiled garments or kill germs. Chlorine bleach helps disinfect laundry; however, if chlorine bleaches cannot be used, pine oil products and quaternary or phenolic compounds disinfect. Presoaking or pretreating heavily soiled areas or stubborn stains is also effective in cleaning garments. When laundering in cold water, use detergents designed for cold water for the best

results, or use extra amounts of regular detergents or dissolve granular detergents before adding clothes.

- Drip, towel or line dry garments when possible, especially if a garment is the only one to be dried, or if air drying will not require unnecessary pressing or reduce the fluffiness of the fabric.
- Avoid fabric softener build up which reduces fabric absorbency.

Garments that are warmer or cooler for the environment may also require additional care such as dry cleaning or special laundering, drying or pressing. Pros and cons should be weighed so that realistic and satisfactory decisions can be made when selecting these garments.

Save Energy When Shopping

Plan ahead for what you need and combine trips to use one-stop shopping centers or adjacent locations. Car pooling and delivery services also reduce personal transportation energy costs.

Mail order shopping is on the upswing. The convenience of browsing through catalogs, privacy of evaluating items ordered, easy return of merchandise, transportation energy savings and competitive prices contribute to increased mail order interest.

Grooming Habits Can Save Energy, Too

Letting water run when brushing teeth, washing hands or shaving wastes energy. Avoid overheating grooming appliances or leaving heated appliances unused.

Depending upon the amount and temperature of water drawn for a tub bath or run for a shower, either a shower or a bath can be more energy saving. Under average conditions, showers tend to be more conserv-

ing. It also helps to turn the water off when soaping or shampooing.

Recycle To Save Energy

Remaking or modifying garments or accessories can be an asset to your wardrobe and eliminates unnecessary production, purchasing or replacement items and disposing of discarded items.

Recycling is economical and creative. Projects can vary from changing accessories, hemlines or adding trim to recutting a usable garment into another garment. Garments can be recycled for fit or fashion.

Possible Effects of Energy On Future Wardrobes

Although approximately only one percent of petroleum is utilized for synthetic fibers, a radical decline or absence of petroleum will affect the availability of synthetic fibers. Priorities such as defense, space travel or industrial uses may alter fiber availability. However, new energy-saving comfortable fibers, fabrics and garments will be available.

The "throw away" society has faded with an increased emphasis on longer lasting quality. Fashion trends will change at a slower pace with garments being functional, more versatile and acceptable for a greater number of occasions and different environmental conditions.

More convenient grooming and laundry appliances will likewise conserve energy costs. Improved soil release finishes and appliances that reuse wash and rinse waters, use lower temperatures or automatically sense when clothes are clean and dry should be available in the near future.

Clothing costs will continue to rise due to the increased cost of petroleum for raw products, production and retail overhead; the change to alternative energy sources will also affect prices.

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Energy Saving Clothing Tips At A Glance

To Stay Warm:

Garments and Garment Features

- Close fitting garments
- Layers on both upper and lower body
- Sweaters over other garments
- Full length sleepwear and robes
- Lined garments
- Pants under dresses or skirts
- Undershirts
- Full length slippers
- Pant liners
- High necklines such as turtlenecks
- Long sleeves, particularly with cuffs or elastic casings
- Double breasted closures
- Vests

Accessories

- Scarves, mufflers
- Dickies
- Full length socks
- Boots
- Leotards, panty hose, textured stockings
- Insulated shoes
- Shoes with enclosed heel and toe, thick soles
- Belts
- Close fitting hats, caps
- Gloves

Fibers

- Natural fibers and high percentage blends of natural fibers (cotton, wool, silk.)
- Polyesters with special finishes (such as Visa[®], Zelcon[®], Milease[®])
- Specialty hair fibers pure or blends (camel, angora, mohair, rabbit and other furs.)
- Wool-like acrylics

Fabrics

- Thick or bulky (blanket-like)
- Tightly woven or knitted (such as gabardine, denim)
- Large textured yarns (such as sweater knits)
- Pile (especially fluffy ones such as corduroy, velvet)
- Water repellent or waterproof
- Real or fake furs
- Quilted
- Bonded, laminated or flocked
- Looped (such as terrycloth and boucle)
- Napped (such as flannel)
- Soft textures
- Dark colors
- Feathers, down

To Stay Cool:

Garments and Garment Features

- Loose fitting garments
- Single layers
- Short length garments
- Unlined garments
- Half slips
- Lowered or open necklines
- Short sleeves or sleeveless
- Garments without tight fitting waistlines

Accessories

- Low cut socks
- Sandals and open styled shoes
- Brimmed hats
- Loosely fitted belts or loosely tied scarves
- Omit hose or wear panty hose with cotton panty top
- Omit jewelry or wear lightweight or loose designs

Fibers

- Natural fibers and high percentage blends of natural fibers (such as cotton, linen)
- Rayon
- Polyesters with special finishes (such as Visa[®], Zelcon[®], Milease[®])

Fabrics

- Loosely constructed (such as gauze, challis)
- Sheer or open (such as voile)
- Smooth or crisp (such as organdy, chintz)
- Finishes which reflect light
- Light colors
- Crinkled weaves (such as seersucker) or crinkled finishes (such as plissé)

Whether you want to dress to be warmer or cooler, begin by studying your current wardrobe to see what is suitable. Explore ways to combine separates or accessories. Make a list of what you need and how you will obtain each (buy locally, order, make or remake). Each time you add an item, consider whether or not it is an asset in terms of cost, attractiveness, compatibility, upkeep, need and physical comfort.

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15M-8-79, Reprint

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