

## Burlington and the UPF Clothing Market

When Alan S. was leafing through the latest LL Bean catalog looking for clothes to wear on a skiing trip, he noticed a little sun pictured below a shirt. Wondering what the sun meant, he flipped back to the symbols description to find that the sun stood for UPF protection greater than 15 for the garment. Thoughts of UPF protection led to thoughts about glare from snow – glare that went everywhere – in one’s eyes, face, hands and any other exposed part of the body. “Hm-m-m-m,” he thought, “maybe I ought to get that shirt or better yet a jacket with UPF protection...”

While Alan is looking for a jacket with UPF protection, Mark Cumiskey of Burlington Industries’ PerformanceWear Division, is also thinking about UPF clothing, but his thoughts are quite different. He wants to know how to convince Alan and others to buy those UPF garments because that’s part of his job. He wonders what are the most likely targets for UPF clothing, how to create awareness for the product and what are the most effective ways to motivate purchase. Mark has all sorts of information at his fingertips about the increasingly deadly effects of melanoma (very serious skin cancer). Is that information, however, powerful enough to motivate purchase? After all, there is a price for UPF clothing. The fabric to make such garments does cost a little more. Will consumers *buy* increased sun protection?

Mark’s problem is complicated because most consumers aren’t aware of the need for sun or UPF protection in clothing. By now, most of them have heard that they should always use SPF lotions to protect their skin when in the sun, but many of them don’t bother for a variety of reasons – they won’t be in the sun long; they’ll be in the shade; it’s too much bother or they haven’t gotten skin cancer yet, so why would they now? (Only two out of every five people consistently use sunscreen when exposed to the sun.) “If they won’t use lotion, then how I am going to get them to use UPF clothing?” mused Mark. “How do I make them aware of the problem? How do I get them to look for UPF clothing? How can I convince them to pay more for these clothes and how do I get them to buy UPF clothing made from Burlington fabrics? And who should I be trying to convince?”

Of course, there are the Alans of the world – young outdoor enthusiasts who spend a lot of time in the sun. They are an obvious target, but they’ve usually spent 15 years or so in the sun already without UPF clothing. For them, much of the damage has already been done as 80% of

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sun exposure occurs before the age of 18. Are they going to be persuaded that they need such clothing after all these years?

Maybe there are other segments in the market that would be more receptive to this product. Parents – in particular, mothers of young children – might be a good market. They would naturally want to protect their children, and it's well known that younger skin burns more easily than older skin. Mark was heartened to read not long ago that parents of young children are spending far more than their parents did on their children. "If they'll buy those expensive umbrella strollers and Spanish lessons for little kids, why wouldn't they buy UPF clothing?" Mark wonders.

Then, there are other segments. What about gardeners – either home gardeners or professional ones? They spend considerable time in the sun, as do construction workers, policemen and golfers.

## **Skin Protection and Cancer**

As increasing numbers of Americans spend more time in the sun, the chances of skin cancer are accelerating. In 1935, 1 in 1,500 people were projected to develop malignant skin cancer, melanoma; today that projection is 1 in 75 and 1 in 5 people will develop some form of skin cancer. Each year, dermatologists estimate that one million Americans develop skin cancer. The real damage is exposure over time. Most sun damage occurs in children under 15 years of age, but it won't turn into skin cancer until 20-30 years later when they are reaching middle age.

To make matters worse, children burn much faster than adults. One hour in the sun for an adult equals 4 minutes for a baby. In the length of time that it takes Mom to strap a child into a stroller, adjust her pocketbook and push that stroller across a parking lot to stores, a beach or a park, a baby could theoretically develop sunburn. Even if she does this in the shade, the ultraviolet rays that cause sunburn may reach the child as ultraviolet rays can reflect off snow, water and sand, and clouds do not filter out the harmful rays on overcast days.

Of course, as the child gets older, it takes longer for them to burn, but then they also are prone to spend more time outside, swimming, bike riding and engaging in other activities. They could protect themselves with lotion, but that often leaves a greasy feeling on the skin, only lasts for one and a half-hours and has to be re-applied more and more frequently as its effectiveness declines with repeated use on the same day. It's hard to imagine children transporting lotion with them and remembering to use it. After all, they do not see the damage right away and neither do their parents and carefully smearing themselves with lotion is a geeky thing to do!

How does skin cancer occur? Ultraviolet B rays, dubbed the "burning rays" target the upper layers of skin and can actually break down DNA and RNA, causing free-radical damage and cell mutation. The real culprits, however, are the ultraviolet A rays or, as they are called, "the silent killers," that penetrate the skin further and destroy the collagen matrix. This disturbance of genetic material and cell formation is one of the factors that lead to the development of skin cancer.

There are three types of skin cancer: (1) basal cell carcinomas, (2) squamous cell carcinomas and (3) malignant melanoma, which is potentially life threatening. Most skin cancers start as basal cell carcinomas and if untreated or unrecognized, can progress to melanoma. The occurrence of melanoma is increasing at a rate of 3% annually which doesn't sound too bad until one considers that melanoma is the most common form of cancer in women aged twenty to twenty-nine, the second most common form of cancer in women aged thirty to

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thirty-four (behind breast cancer) and is the fifth most common form of cancer overall in the United States behind lung, breast, colon and prostate cancers. Melanoma shows up as pigmented spots that are irregular in any way (shape, size, color, and symmetry) or are growing. Depending on their bodily location (on the back), they may not be discovered early on for treatment. Furthermore, as table 1 indicates, some skin types are more likely to burn than others are.

**Table 1 Sensitivity of Skin Types to Sunburn**

Type Skin	Type Sensitivity	Characteristics
I	Extremely	Always burns, never tans--Celtic
II	Very	Burns easily, tans minimally
III	Average	Burns moderately – Caucasians
IV	Minimally	Always tans well to moderately brown – olive skin
V	Rarely	Tans well to a dark brown – brown skin
VI	Never	Deeply pigmented – black skin

Source: Tondl, 1999

As the threat from melanoma increases, consumers can react in several ways. The most obvious is to stay out of the sun, but that is contradictory to the increasingly active lifestyles of many young Americans, which is encouraged by physicians. Thirty minutes of exercise each day is after all good for one's heart and our leaders such as presidents Clinton and Bush set an example by jogging. Millions more Americans are skiing, hiking, snow boarding, skating and wind surfing. A second way to reduce skin cancer is using lotions, but as we've already seen, many Americans although well aware that they should use SPF lotions fail to do so.

A third means of protecting skin is to wear UPF clothing but at present there are few such garments offered and most are not widely available in retail stores. Usually UPF clothing is available only through catalogers who expend limited effort in promoting these garments. The companies that sell UPF rated garments include LL Bean, Liz Claiborne, Orvis, Sportif, the Wise Child, Sun Precautions, Sun Wise, Great Provision Outdoor Company, The North Face and Patagonia among others. Thus, coupled with lack of awareness on the part of consumers is lack of availability and lack of promotion.

## **UPF Clothing**

Ultraviolet Protection Factor, UPF, is a textile classification that determines a fabric's rate of protection from harmful ultraviolet A and ultraviolet B radiation. SPF or Sun Protection Factor is the acronym assigned to sunscreen lotions and cosmetics. Why two types of protection factors? UPF is tested in vitro which means through instrumental measurements. SPF is tested in vivo, on the human body. One can interpret both ratings in a similar fashion. If one is wearing a UPF garment or SPF lotion with a rating of 15, that individual could stay in the sun for 150 minutes before being burnt. UV protection and UPF protection are related, but not the same. Any garment claiming UV% of 50% is actually equivalent to an UPF rating of 2 which means

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one would burn in one-half the time versus no protection at all. (See Table 2.) Obviously it takes a lot of UV% filtration to produce an acceptable UPF rating!

**Table 2 Relationship of UV protection and UPF protection**

UV%	UPF
50%	2
75	4
90	10
93	15
95	20
97	33
98	50
99	100
99.9	1,000

Source: Outfitter Magazine (1999, July), p. 39

There are several ways to increase the UPF of a garment. First, fiber producers such as DuPont, Nylstar and Sterling Fibers offer acrylic, polyester and/or nylon fibers with an additive that improves the UPF rating. These fibers are made into yarns, then fabrics and finally into finished garments. Second, textile producers can construct fabrics with many ends and picks per inch. By doing so, the construction of the fabric mechanically blocks the harmful UVR. Companies such as Burlington Industries, Milliken & Co., AlliedSignal and DuPont use this approach. Also, Ciba Specialty Chemical offers a chemical treatment that can be applied to fabric to increase UPF. Third, garments can be constructed to reduce exposure to the sun. For example, longer sleeves and hats with longer bills or flaps that cover the back of the neck would reduce exposure. Given style constraints (who wants to wear a hat with a flap in the back?) the easiest means of increasing UPF protection through clothing is to buy UPF rated garments.

**Burlington and UPF Clothing**

Burlington's Industries is one of the largest softgoods manufacturers in the world; employs approximately 19,000 people; has plants in three states, Mexico, and India, and has been committed since its founding to the development and production of innovative fabrics. Demonstrating market savvy and progressive ideas, it was one of the first firms to produce rayon in 1924. Within a few years it became the nation's leading producer of rayon – even though the firm itself was less than ten years old. Since then, the company has grown through a

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combination of acquisitions, global expansion and introduction of new products. (For more information on Burlington, go to [www.Burlington.com](http://www.Burlington.com).)

Of its five divisions, Burlington PerformanceWear is one of the most exciting as it combines luxury, technology, fashion, function, style and value in its fabrics and garments. This division makes a wide range of products from women's wear, men's slacks, blazers and suits, high-tech activewear, uniforms and protective products for medical and clean room uses.

Burlington produces a variety of performance fabrics, fibers and systems. Some of these are: (1) Xalt – a high-tech composite system that combines fabric and laminate technology for superior waterproof, breathable, windproof comfort and protection. During workouts, Xalt breathes away perspiration to keep the wearer dry and comfortable. (2) Versatech is a combination of a specially designed, superfine, tightly woven microfiber yarn and a water repellent finish that makes it resistant to water penetration. (3) Durepel is a water and stain repellent finish designed to keep wearers drier longer. (4) Micromove is a lightweight, breathable, soft and drapable microfiber fabric designed to be lightweight and move with the body. (5) 3D Dimension is a unique, woven fleece, that provides more stretch, is water repellent, and is waterproof and windproof. (6) Moisture Control System (M.C.S.) is outdoor sportswear fabric for high aerobic activity that absorbs, wicks and dries faster than cotton.

UPF clothing is found in the M.C.S. Blocker system. M.C.S. is a specifically designed synthetic fabric, either nylon or polyester, that works well for strenuous, high-aerobic activities. On this fabric, the M.C.S. is dispersed over a wider surface than conventional fabrics with the result that the fabric dries more quickly than cotton does. It also doesn't stick to the wearer. The addition of the term, Blocker, to M.C.S. adds another feature to the fabric which is protection from the sun. The phrase UPF30 is contained within the O of the subbrand Blocker to attract the consumer's attention and quickly communicate this benefit. Communication of M.C.S. benefits to the consumer is through a hangtag that can be affixed to the finished garment.

The front of the hangtag contains the name of the brand, M.C. S. BLOCKER, with "moisture control system" spelled out in smaller letters and the company and division product names, Burlington and PerformanceWear fabrics, at the bottom. Inside on the left half of the tag, the main benefits of the product are highlighted as "More advanced..." "More protection..." "More strength..." "More comfort..." The UPF feature is mentioned under the more protection section as a UPF rating of 30, even when wet. This feature is prominently emphasized on the right half of the tag with the headline "M.C. S. Blocker maintains its UPF 30 rating..." The bullet points under this headline indicate that launderings, abrasion, continuous exposure to light, perspiration, and exposure to chlorinated pool water will not damage the SPF rating. The hangtag is a combination of oranges, yellows and bright pinks, which makes it highly noticeable. At present, the hangtag is Mark's main form of communication to consumers.

Because Burlington does not sell these PerformanceWear products directly to consumers, it must work with its customers, which are companies such as LL Bean, to promote the specific fabrics, fibers and treatments. When a cataloger places an order, Burlington sends the fabric to the catalogers' cutter to begin the manufacture of a garment, which will be finished in a plant that supplies the cataloger. As a result, a shirt made of M.C.S. Blocker fabric may have the LL Bean or Patagonia brand name on the inside label. Specifics of the garments' construction and materials are appended as hangtags by the company packaging the garments for the cataloger. Thus, consumers may never see Mark's hangtags unless LL Bean and other customers are willing to affix them to garments made from M.C.S. Blocker.

Through cooperative advertising, Burlington can get additional promotional push for their fabrics through mentions in the catalog and designations such as the sun that Alan saw.

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Through this co-branding effort, the names of Burlington and companies such as LL Bean, Land's End and Patagonia can reinforce each other's quality image.

The problem with this arrangement is that other textile firms, Milliken & Co., AlliedSignal and DuPont, can supply UPF rated fabrics and all of these manufacturers would like to have hangtags denoting their UPF fabrics on finished garments. From the cataloger's point of view, this becomes a problem as the garments made from one textile producer's fabric must be carefully distinguished from another in order to match the right hangtag with a garment made from the right fabric. Given that the fabrics from multiple manufacturers may feed into the same cut and sew operations making a variety of garments for the cataloger, this tracking of fabrics in order to apply the appropriate hangtags can be a real nuisance. In addition, one has to wonder how many final consumers actually read all the hangtags affixed to any garment rather than just cutting off the hangtags and throwing them away? Is their confidence in the brand primarily placed in the catalogers' brand or in the brands of suppliers to the cataloger?

Mark has a dream of rivaling "Gore-Tex" in the breathable, waterproof fabric world. The Gore-Tex brand, which is widely known and has generated high brand preference and loyalty, is actually a textile manufacturer's brand. It is made by W. L. Gore, a specialist firm in flouropolymer technology and manufacturing. Fabrics are only one of its divisions – others include electronics, filtration and separation devices, medial and health care products, and sealants. Gore-Tex is, however, one of the company's best known brands and one can find firemen, military personnel, doctors and health care professionals, police and outdoor enthusiasts wearing garments and uniforms that are breathable, windproof and waterproof – thanks to Gore.

To achieve high brand recognition, W. L. Gore uses consumer advertising which costs them over \$1.2 million annually, has an active web site ([www.goretex.com](http://www.goretex.com)) which promotes Gore-Tex and sends web users to the retailers that sell garments made of Gore-tex, and insists that all garments made of Gore-Tex not only have hangtags, but also have a Gore-Tex label sewn into an inside or outside seam on all products. In newer products, the brand name may be embroidered on the sleeve or chest of the garment or be found on a small metal tag on the outside. To maintain quality control, only a limited number of specialist garment manufacturers are licensed to use the fabric. To ensure water tightness, Gore produces Gore-Seam Tape that can be used to close any holes created while sewing seams. To help consumers select the garment that is right for them and the intended use, Gore-Tex produces a number of hangtags such as an EXTREME WET WEATHER tag. A quick check of the LL Bean catalog indicates that Gore sells garments that are co-branded, LLBean's Gore-Tex Microsuede Rain Parka and items under the Gore-Tex brand only – Gore-Tex Mountain Guide Parka.

To rival Gore-Tex, Burlington would have to stimulate secondary demand through a pull strategy aimed at final consumers. This would require generating demand for individual brands such as M.C.S. Blocker by spending millions of dollars on consumer advertising. At present, many of Burlington's advertising dollars are aimed at corporate advertising promoting the Burlington name. It should be noted that Burlington was the first textile company to engage in network television advertising way back in 1955, so advertising *does* have a long tradition at Burlington.

Burlington has manufacturing plants that could make apparel under a Burlington brand name, but then those garments would compete with the current items at LL Bean and other apparel firms that use the M.C.S. Blocker brand. LLBean would then view Burlington as a competitor and might move away from co-branding garments with Burlington with the result that Burlington would lose the quality reinforcement gained through co-branding with LLBean.

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At present, Mark needs to decide whether UPF rating is a feature that would compel consumer purchase if Burlington did beef up its advertising. Actually, Mark and Burlington are ahead of some other manufacturers by producing UPF-rated fabric. In countries such as Australia and New Zealand, classifications for sun protective clothing have been in use since 1996. In the U.S., a sub-committee of the American Society for Testing and Materials (ASTM) which is regulated by the Consumer Products Safety Commission and the Federal Trade Commission is charged with setting standards and measurements for UV-protective clothing. Once those standards are set, all clothing could be UPF rated and firms might be required to indicate those ratings on labels. If that happens, Burlington could have a significant lead in the marketplace if it advertises its UPF textiles or garments now. The problem is whether consumers will actually use UPF ratings to make purchase decisions.

In addition, Mark has to decide what market segments to target – gardeners, parents of small children, construction, and other outdoor workers. He also has to determine the best means to reach the market. Is it hangtags with or without co-operative advertising? Are the hangtags that he has now sufficient to “sell” consumers on M.C.S. Blocker?

From a more long run perspective, should he and Burlington even consider competing directly with Gore by making M.C.S. Blocker garments? Is there room in the market for two breathable, waterproof, windproof brands of outer wear?

### Questions for Discussion:

1. The case identifies three general targets for UPF clothing: parents of young children, young outdoor enthusiasts and individuals who work outdoors (gardeners and construction workers). What kind of motives would each of these groups have in regard to purchasing UPF clothing? Would these be approach or avoidance?
2. What kind of learning would each group need to engage in to be convinced to buy this kind of clothing?
3. How would lifestyle affect the need for UPF clothing?
4. What kind of appeals might be effective in convincing these consumers to buy UPF clothing?
5. How could the self-concept be used to explain purchase of UPF clothing?

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