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Skin Care Technical Bulletin  
**SUN CARE**

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Ultraviolet (UV) rays are the primary cause of accelerated aging, contributing to the discoloration, sagging and wrinkling that results from UV-induced damage to the surface of the skin as well as to the underlying collagen and elastin that give our skin firmness and structure.

We are exposed to UV radiation anytime we're outdoors, even in winter or on cloudy days. Indoors, computers and fluorescent and halogen lights also add to our cumulative UV exposure. The amount of UV radiation reaching the earth is increasing each year as the ozone layer is depleted. Research shows that as UV radiation increases, so does the incidence of skin cancer, particularly life-threatening melanoma. And the combination of UV rays and environmental pollutants dramatically increases the total load of free radical attacks our bodies must cope with.

**By combining UVA and UVB sunscreen agents with the patented antioxidant protection of Vital Repair+™, Enfusselle SPF 15 for Body and SPF 30 for Body provide unique, patented, non-irritating and extremely effective sun protection while using the lowest levels of chemical sunscreens possible.**

#### CLINICAL PROOF

*Extensive independent clinical testing has demonstrated:*

- UVA and UVB (broad spectrum) protection helps inhibit the UV-induced accelerated loss of collagen and elastin.
- Provides both high-level and broad-spectrum UV protection without irritation.
- Very high protection against sunburn for blondes, redheads, and fairskinned persons.
- Diminishes the visible signs of aging such as fine lines and wrinkles.
- Oil free.
- Safe for sensitive skin.
- Waterproof and sweatproof.
- Won't clog pores.

**Enfusselle's sunscreen formulas are so unique, they are patented (U.S. Patent No. 6,036,946).**



### THE SHAKLEE UNCONDITIONAL GUARANTEE

If for any reason a Shaklee product is not satisfactory, return it to your Shaklee Independent Distributor or Shaklee Corporation, for exchange or full refund.

**SPF 15 For Body**  
4 fl oz — All Skin Types — #32518  
**SPF 30 For Body**  
4 fl oz — All Skin Types — #32519

## HOW THE SUN AFFECTS OUR SKIN

Exposure to ultraviolet (UV) radiation — both UVA and UVB rays — stimulates melanin production, which is why we tan. UVA radiation actually penetrates the epidermis, disrupting and damaging the underlying collagen and elastin, the elastic material that keeps skin firm. The resulting “photoaging” leads to premature wrinkling and sagging.

UV radiation varies in intensity according to season, altitude, and time of day. These are “burning” rays, and are now believed to be a major contributing factor in solar-induced skin cancer. Research shows that UV radiation may damage DNA and cause cell mutation, as well as altering the immune response and weakening the skin’s ability to fight abnormal cells. A possible link has been established between severe sunburns in childhood and greatly increased risk of melanoma in later life.

Melanoma is a form of skin cancer that is characterized by extremely rapid progression. Because of this rapid growth, it is rarely caught in time, and almost always results in death. According to the American Cancer Society, the melanoma rate has been increasing by about 4% per year since 1993 — over 40,000 people were diagnosed in 1997 alone.

The sad fact is, even if sunshine on your shoulders makes you happy, UV radiation is not your friend.

## FACTORS THAT INCREASE RISKS OF UV EXPOSURE

**Genetics.** All types of skin cancer are much more common among individuals with lightly pigmented skin. Blondes and redheads are particularly vulnerable. And melanoma rates are 20 times higher in whites than in African Americans.

**Time of Day.** At noon, when the sun is overhead, UV radiation levels are 10 times greater than at either three hours before (9 A.M.) or three hours after (3 P.M.). An untanned person with fair skin can receive a mild sunburn in as little as 25 minutes at noon; at 3 P.M. the same person would have to stay in the sun for 2 hours to get the same level of exposure.

**Geography.** The sun’s rays get stronger as you get closer to the equator. Altitude is also a factor: exposure to UV radiation can increase by as much as 4% every 1,000 feet above sea level, putting mountain climbers, hikers, and skiers at higher risk.

**Chronic Exposure.** Most UV exposure occurs during everyday activities such as driving or walking to and from your car while running errands. Skin cancer occurs most often on the areas of the body most frequently exposed: the top of the head (particularly for those who are bald or have thinning hair), the nose, the tops of the ears, and the left arm and left side of the face among Americans who drive a lot (this risk factor shifts to the right side of the body in countries where you drive on the left side of the road). Some researchers theorize that the risk of getting age spots on the backs of your hands may correlate to the amount of time you spend driving with both hands on top of the steering wheel. Another important note: even someone sitting in the shade may still be exposed to one-quarter or more of the total UV radiation present. And up to 80% of the sun’s rays penetrate even dense cloud cover.

**Use of Tanning Beds.** Using a sunbed once a week from age 20 may double a person's risk of skin cancer by the age of 45. Sunbed use may also increase skin fragility, leading to easier bruising and blistering.

**Depletion of the Ozone Layer.** In 1997, a global study produced evidence of a 40% depletion of the ozone layer in the northern hemisphere in just the past year. Ozone is found in the earth's stratosphere and it absorbs much, although not all, of the sun's damaging UV rays. The annual average amount of UVB radiation — the portion of the UV spectrum that causes the most damage — has been steadily increasing by 3 to 5% per decade in North America. It is estimated that each 1% increase in UV could mean a 2% increase in skin cancer. Current and projected levels of ozone depletion are anticipated to contribute an additional lifetime risk of skin cancer of up to 10% in children alive today.

**Fluorescent and Halogen Lights.** International researchers believe that cumulative exposure to even the low levels of UV radiation from indoor sources may increase the risk of skin cancer. This risk is even greater as companies switch to louvered office lighting designed to reduce glare on computer screens. These lights focus more light downwards — a person sitting directly under louvered fluorescent lights might be getting 10 times more radiation than the person at the next desk. As scientists continue to evaluate the effects of cumulative UV exposure from all sources, researchers are also investigating the low-level UV radiation from other manmade sources, such as computer screens.

**Increased Environmental Pollution.** In a kind of chicken-and-egg relationship, sunlight and pollutants combine forces to wreak more havoc on your skin than either one alone. Not to be confused with the stratospheric ozone which is currently being depleted, ground level ozone is formed in the air by sunlight-induced reactions between industrial and automotive emissions. Ozone pollution gets worse when the weather heats up, and ozone readily reacts with whatever it touches, which damages living tissue. Research has shown that ozone induces free radical damage in epidermal skin and significantly depletes skin supplies of naturally protective vitamins C and E.

**Use of Alpha-Hydroxy Acids (AHAs).** These products help reduce the appearance of lines and wrinkles — unfortunately they also significantly thin the surface layer of skin that helps provide protection against UV damage. The FDA and the American Academy of Dermatologists strongly recommend staying out of the sun and use of sunscreens for people who use AHA products.

## MINIMIZING UV EXPOSURE RISKS

**Avoid exposure between 10 A.M. and 3 P.M.** when the sun is most intense.

**Count time spent in the water or out on hazy days as time in the sun.** Water lets nearly all UV rays through, and even on cloudy days nearly 80% of the sun's rays can reach you.

**Don't depend on clothing or shade for protection.** Wet and light-colored clothing offer little or no UV protection. Also remember that light reflects: sitting under a beach umbrella can create the same UV exposure as direct sun.

**Apply UVA/UVB protection every day, indoors and out.** Statistics prove that most UV exposure occurs when we're not even thinking about it. Be sure to cover ALL areas of your body that will be exposed to the sun: remember the top of ears and forehead, bald spot, tops of feet when wearing sandals, and the back of neck and hands. The recommended daily precaution is SPF 15; use a higher SPF if you'll be outdoors for two hours or longer.

**Boost your skin's natural defenses against environmental pollutants.** Researchers agree that the same nutrients which protect your health also play a vital role in the vitality and appearance of your skin. Clinical studies show that Vital Repair+™, the patented complex (U.S. Patent No. 6,036,946) integral to the Enfuselle skin care line, actually breaks each link in the chain of free radical damage on the surface of your skin.

## HOW DO SPF 15 FOR BODY AND SPF 30 FOR BODY WORK?

Dermatologists know that an effective sunscreen must provide a high level of protection against ultraviolet radiation without irritating the skin. Enfuselle achieves that goal with two waterproof products to meet all your sun care needs. Quickly absorbed to lock in moisture without leaving a sticky finish. Ideal for sensitive skin.

- **Patented SPF formula** (U.S. Patent No. 6,015,548) with broad-spectrum UVA and UVB protection shields skin from sun's harmful rays to help prevent skin damage.
- **Patented Vital Repair+™** (U.S. Patent No. 6,036,946) breaks each link in the chain of free radical damage to defend against accelerated aging.

## READ MORE ABOUT IT!

For more information about Enfuselle products, check out the other Skin Care Technical Bulletins available on the Enfuselle CD-ROM:

- #1 Introduction
- #2 How to Use
- #3 Cleansing
- #4 Neutralizing
- #5 Repair
- #6 Optional Moisturizing
- #7 Targeted Treatments
- #9 Men's Skin Care

### WHAT IS SPF?

**SPF means sun protection factor.** If you wear a sunscreen with an SPF of 15, you have 15 times the protection from the sun than you'd have if you weren't wearing any sunscreen at all. In other words, if you would burn after 10 minutes in the sun with no protection, an SPF of 15 would allow you to stay in the sun for two and a half hours (10 minutes times SPF 15 = 150 minutes or two and a half hours) before burning. Keep in mind that you would still receive a burn! Sunscreens don't give you license to stay forever in the sun. Also remember that sunscreens aren't cumulative: if you combine a moisturizer with SPF 15 with a sunscreen product with SPF 15, your sun protection factor is still 15, not 30.

Virtually all sunscreens protect against UVB radiation — in addition, some products screen out a small part of the UVA spectrum. Enfuselle's patented sunscreen formula (U.S. Patent No. 6,015,548) provides broad-spectrum protection against both UVB and UVA radiation.

### WHY NO AVOBENZONE?

A "new kid on the block" sunscreen ingredient, Avobenzene currently does NOT meet Shaklee's strict standards for product stability — in fact, Avobenzene has shown a disturbing tendency to decompose when exposed to UV light ... particularly unfortunate for a sunscreen! In addition to using low levels of chemical sunscreens, Enfuselle's patented formulas (U.S. Patent No. 6,015,548) provide broad-spectrum protection against UVA and UVB radiation without the need for Avobenzene. Additionally, the Enfuselle Time Repair A.M.™ SPF 15 incorporates ingredients that help screen out UVA wavelengths (zinc oxide and titanium dioxide). This means that these sunscreen products provide reliable, full protection against UV damage.



For more information, call your Shaklee Independent Distributor. To order, call 1-800-VITA LEA (1-800-848-2532).

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