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## The Right Sunscreen

### Cut Through the Hype and Learn What Works

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According to the American Cancer Society, more than 2 million people are diagnosed with skin cancer in the United States each year. There are more than 2,000 over-the-counter sunscreen formulas on the market today. How can you tell which sunscreens are the safest, most effective, and represent the best value for your money? In most cases, the answer comes down to the difference between the two types of filtering ingredients.

#### Chemical or Physical?

The UV radiation in sunlight consists of UV-A, UV-B, and UV-C rays. UV-A and UV-B are both responsible for photoaging, skin cancer, sunburn,

Work by absorbing UV radiation; Require application 30 minutes before sun exposure; Provide partial protection from UV spectrum; May irritate the skin and eyes; Not regulated for safety by the US Food and Drug Administration (FDA)--some may even be carcinogenic; Not photostable (exposure to sunlight degrades effectiveness); Avobenzone is the most commonly used chemical filter ingredient.

#### Physical UV Filters

Work by reflecting UV radiation; Start protecting immediately upon use; Provide full broad-spectrum protection; Non-irritating to skin and eyes; Safe, as particles do not penetrate the skin; Highly photostable (exposure to sunlight



Protection from harmful UV rays can do wonders for your skin.

tanning, and wrinkling. UV-C is not a factor in skin health, as it is absorbed by the Earth's atmosphere and does not reach us in significant amounts. Broad-spectrum sunscreen protects against both UV-A and UV-B. This protection can work in one of two ways: chemical or physical.

does not change effectiveness).

Zinc oxide and titanium dioxide are the most commonly used physical filter ingredients. Clothing and shade structures also count as physical filters.

#### Chemical UV Filters

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*"Feeling gratitude and not expressing it is like wrapping a present and not giving it."*

- W. A. Ward

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## How Stable Is It?

One of the most important factors in the effectiveness of a sunscreen formula is also one of the least known to the general public. Photostability is an ingredient's ability to remain effective after exposure to sunlight. Many people are aware that this is an issue for numerous skin care ingredients, but may be surprised to learn that some active ingredients in sunscreen--a product whose sole purpose involves being exposed to sunlight--are not photostable. In addition, the FDA's new rules do not require sunscreen ingredients to be tested for photostability. Yet, many consumers expect that their sunscreen will protect them for longer than one hour.

Physical filters such as zinc oxide and titanium dioxide are photostable. Studies have shown that these ingredients suffer no degradation after more than two hours of sun exposure. However, the chemical filter avobenzone is not at all photostable, and degrades almost completely in less than one hour. Even worse, avobenzone also degrades on contact with other UV filters such as zinc oxide or titanium dioxide, and with metal ions such as iron oxide, which is commonly found in makeup. This goes a long way toward explaining why many consumers experience sunburn even after applying sunscreen as directed.

## Health Concerns

Effectiveness is not the only thing to consider in any product being applied to the face or body. Significant health concerns have also been raised about many sunscreen ingredients. Here are some issues to consider.

Avobenzone has been found to generate free radicals beyond acceptable safety levels after sitting on the skin for just one hour, and children and pregnant women have been advised not to use products containing it.

Octocrylene, which is known to act as an endocrine disrupter, is used in many sunscreens as a stabilizer. It can also cause skin irritation. According to the Archives of Dermatology, "Octocrylene appears to be a strong allergen leading to contact dermatitis in children and mostly photoallergic contact dermatitis in adults."

Chemical UV filters can also have harmful effects on the environment. Octocrylene does not seem to be effectively contained in wastewater treatment plants, and studies in Switzerland have indicated that it accumulates in fish. Oxybenzone, a chemical UV-B filter often used in combination with avobenzone, has been found to negatively impact reef ecosystems and biodiversity.

Physical UV filters, in contrast, have an excellent safety profile. The FDA has long considered zinc oxide to be a safe ingredient for both external use and as a food additive, even in infant formula.

Considering all these factors, physical UV blockers represent the best choice overall. The main challenge in getting consumers to use sunscreens based on physical filters is purely cosmetic: zinc oxide and titanium dioxide tend to feel thick and greasy, and are visible on the skin, leaving a white residue. However, new advances mean there are now an increasing number of sunscreens that use these ingredients in formulations that allow for clear application.

When evaluating a sunscreen, the most important considerations should be safety and effectiveness. Carefully examine the ingredients and make use of all available information to make the best choices for yourself and your family.

*Jason Barbara is director of marketing at Dermagenics, a skin care line that includes sunscreen, cleansers, and moisturizers.*



Learn what to look for to get the right sunscreen.

# Cultivating a Gardening Habit

## Discover the Health Benefits of Yard Work

Feeling the need to exercise, clean up your diet, meditate? Want to be more creative, get out and meet people, enjoy the outdoors, and slow down? There's one activity in which you can accomplish all of these objectives: gardening.

### ENCOURAGING EXERCISE

Studies show that vigorous digging burns 500 calories an hour, weeding burns 210 calories, and mowing the lawn burns 400 calories. As a moderate exercise, gardening has been found to decrease the risk of heart disease and diabetes, and a study at the University of Arkansas found that gardening was almost as effective as weight lifting in reducing the risk for osteoporosis in women. So instead of taking that indoor aerobics class this summer, try mowing the lawn or planting an herb garden.

As with any exercise regimen, the key is to start at a comfortable pace and gradually work your way up to longer, more difficult activities. Your heart rate should be about the same as when you take a brisk walk.

### IMPROVING YOUR DIET

Gardening will also likely help you eat better. Research shows that people who grow gardens eat more vegetables and fruits than those who don't. Growing fresh herbs, even in a container on the deck or balcony, is another great way to add flavor and freshness to home-cooked meals and an incentive to try new recipes.

### BOOSTING YOUR SOCIAL LIFE

Gardening can also be quite social. Whether at a garden club, a community garden, or an online forum, people love to share ideas, solve common problems, and connect through mutual interests.

### EASING STRESS

And finally, gardening is a great way to manage stress. Spending time outside and tuning in to the rhythms of nature, we're reminded to be patient, slow down, and breathe the fresh air. Whether growing flowers, vegetables, or herbs, a garden reminds us of our connection to life and the abundance that nature so freely gives.



Gardening burns calories and improves diet.

# The Power of Tea Tree Oil

Is your medicine cabinet full of ointments, oils, and creams that each treats one specific ailment? Maybe you can cut down on some of the clutter by adding nature's own wonder drug, tea tree oil, instead.

### What is Tea Tree Oil

Produced in Australia from the tree *M. alternifolia*, tea tree oil acts as an antiseptic, fungicide, insect deterrent, and more. It has been used in Australia by aborigines for generations and, since the country's colonization, has spread to the rest of the world.

Tea tree oil, which can be found as an essential oil as well as in creams, ointments, shampoo, and even toothpaste, can be used to treat a staggering variety of conditions, including: acne, arthritis, athlete's foot, burns, cuts, dandruff, eczema, gingivitis, infection, insect bites and stings, lice, muscle sprains, psoriasis, and rashes. And that's just a partial list!

### Potential Benefits

The exact cause of tea tree oil's effectiveness is difficult to ascertain, and

researchers are still looking into just how much the natural remedy can do for us. Newer studies have looked at its ability to stop the spread of sometimes-deadly methicillin-resistant *staphylococcus aureus* in hospitals.

### Use Safely

While there are plenty of benefits to using tea tree oil, its strength can also be problematic, even dangerous. The Mayo Clinic advises that it's not safe to ingest or take tea tree oil internally, and it is considered particularly harmful if ingested by pets.

Also, like most natural remedies, the US Food and Drug Administration does not regulate tea tree oil as it does other medicines, leaving no standard quality of tea tree oil products. And, while many people enthusiastically support tea tree oil, it is no substitute for professional medical care.

Yet, many people agree that, if nothing else, tea tree oil should be a part of your first aid kit in case of bites, burns, or scrapes. But who knows? You might find yourself using it for much more than

that.

*"Acknowledging  
the good that  
you already have  
in your life is the  
foundation for  
all abundance."*

-Eckhart Tolle

Hey there Leading Lady! I hope you have enjoyed this month's issue of the Leading Lady Newsletter. I have am grateful that you invested a couple of minutes in yourself to read through the articles. Have a productive and fulfilling month!

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