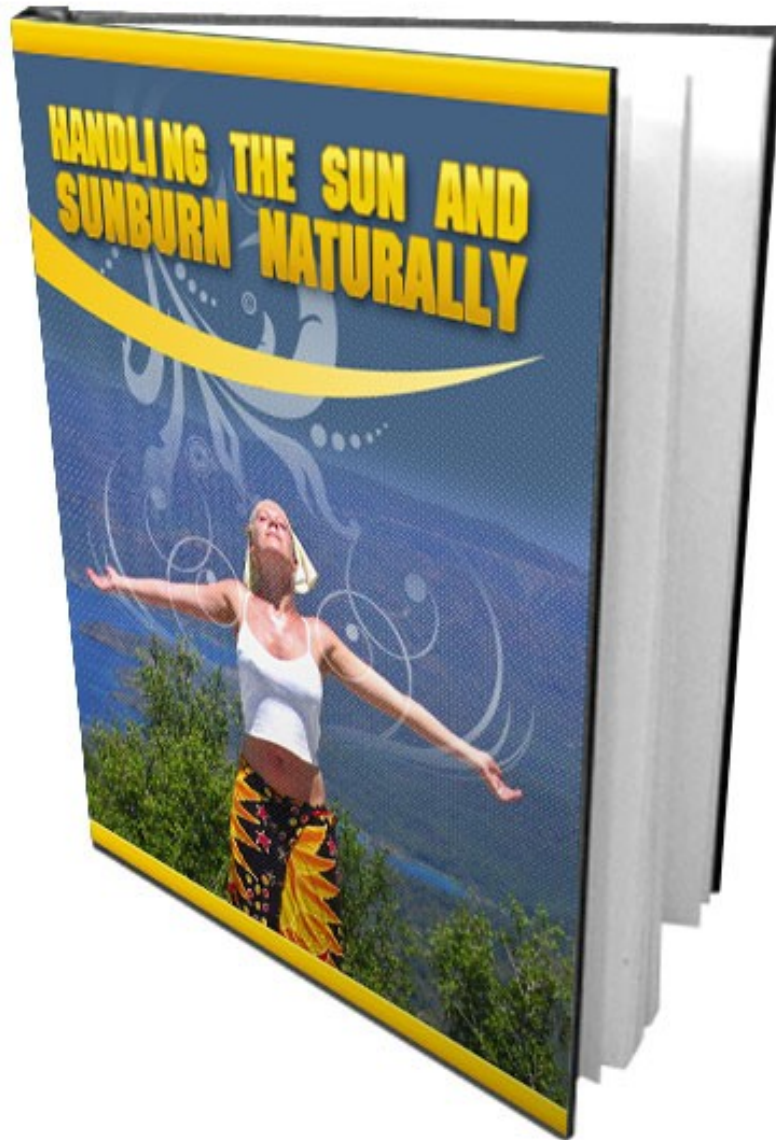




## Handling the sun and sunburn naturally





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## Introduction

Apropos very little, here's a useless piece of information with which to baffle your friends, colleagues and family members.

You've possibly heard of people being described of as 'posh', meaning that they were somewhat upper-class or in many situations, that for some unfathomable reason, they *think* they are. Did you ever wonder where the word comes from?

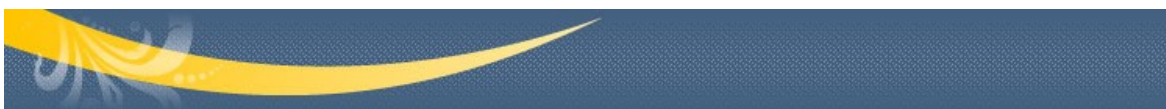
Well, the answer is, it's an acronym for 'port out, starboard home', which is a reference to the days of the British empire when the ladies – the real ladies – who were sailing out to India would stay on the port side of the ship whilst they would stick to starboard on the way back.

Why? Because they didn't want their perfect milk white skin tainted by any hint of having been in the sun! Imagine that, going to all that effort to avoid even the merest tinge of facial redness because it was considered low-class, something that only the common hoi-poloι would ever be subjected to or even contemplate!

How times change.

From the mid-1990's onwards, most people couldn't wait to get away from it all so they could disrobe on the beach before subjecting their body to the seemingly warming, calming ministrations of a blazing sun in a clear blue sky.

The cost of air travel fell so that overseas vacations became a genuine possibility for millions of people for the very first time and, boy, did they take advantage of that fact.





People who had never before travelled much further than the family car would take them were now able to fly thousands of miles to chase the sun. Thus, they were able to expose themselves to the warmth of the sun for the very first time, and they could not believe their luck.

Of course, because of their inexperience, most of these people suffered sunburn to a greater or lesser degree at some point, and equally obviously, most of them had very little idea about what to do when they did so.

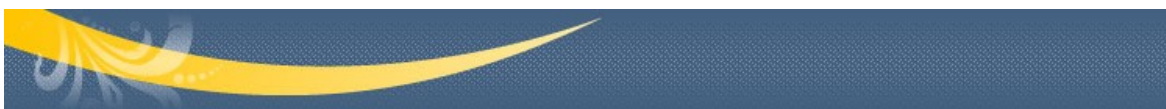
In this guide, I am therefore going to look at three things.

Firstly, I am going to expand upon exactly why the 'posh' ladies got it right whereas for most of the second half of the 20th century, we were all getting it very wrong as far as the sun and its potential 'benefits' were concerned.

Secondly, I want to bring the whole thing bang up-to-date by looking at what you can do to minimize the dangers represented by the sun when you go on holiday, because there is no doubt that playing on the beach in the sunshine is an essential part of the family holiday for many millions of people all over the world. And of course, the main objective is to focus on natural ways of minimizing the dangers posed by being out in the sun for a lengthy period of time.

Thirdly, I am going to highlight natural ways of dealing with the adverse effects of too much exposure to the sun.

Although it should be possible with sensible precautions to limit the chances of sunburn happening to you or family members, it is





unfortunately a fact that balancing enough sunshine against too much is not always a particularly easy task. This is especially true if you are someone to whom regular exposure to the sun is unusual because you have far less natural ability to withstand the effects of sunshine.





## The sun and safety issues

### The risks...

Back in the days when people were taking their first 'sunshine vacations', the rich and famous – movie stars, fashion designers and the like – were making it increasingly fashionable to slowly bake yourself to a golden brown courtesy of the sun, and the browner you were, the more of a status symbol it was.

A deep, rich sun tan was accepted far and wide as a sign that you had money, and lots of it. After all, you were only going to get a tan like that if you could afford to take lots of time off to go somewhere exotic and expensive for a lengthy period of time because a week on the beach after a relatively short haul flight wasn't going to cut it.

And as for sunbeds and the subsequent tanning booth revolution, well, what were they?

In those days, they were the 'secret' that most people didn't know about the 'tans of the stars', something that only the rich and famous could even contemplate indulging themselves in.

Hence, when sunbeds became available to the general public in the 80's and 90's through the explosion of 'health clubs' (the irony!), sun bed centers and solariums, it was no surprise that people flocked to them to get themselves baked to a golden brown on the cheap.

The sunbed 'revolution' enabled every man, woman and child (and yes, there were millions of children using sunbeds on a regular basis, at least in the UK) to get the exact same color as their favorite celebrities





at a fraction of the price, and after all, who doesn't want to look healthy?

And that's the biggest mistake right there.

Having spent centuries avoiding the direct rays of the sun because men and women intrinsically knew that seeing your skin go red and then brown could not be an entirely healthy thing, the picture was suddenly reversed.

All of a sudden, exposing as much of your body as possible to the ultraviolet rays of the sun was immensely beneficial and health giving, a viewpoint that represented the exact opposite of that adopted by the Victorians and every generation before them.

There are now millions of people all over the world who are learning that listening to previous generations might have been a very good idea.

Now we know that whilst sunshine is essential for all life on Earth, it does not necessarily follow that lying out in the sun for hours on end is going to do you any good in respect of your long-term health.

Spending hours exposed to the ultraviolet rays of the sun in an attempt to acquire a 'nice tan' is not necessarily good for you because the evidence about the most of serious effects of over exposure to ultraviolet light make the picture all too alarmingly clear.

There is now plenty to suggest that prolonged exposure to sunlight and to the ultraviolet rays it bombards your skin with is a very bad thing for your health, although it is only fair to say that there are people on the







other side of the debate who maintain that exposure to the sun is more good for you than bad.

So that you are in a position to make an informed decision in this debate, let us consider both sides of the argument.

### **The skin cancer facts**

In the USA, UK, Australia and many other countries in the world, the most common of all human cancers is skin cancer. And according to most authorities including the [American Cancer Society](#), the majority of these skin cancers are related to exposure to the sun.

There are three different types of skin cancer known as [basal cell carcinoma](#) (BCC), [squamous cell cancer](#) (SCC) and [melanoma](#).

All of the three different types of skin cancer are malignant, but the first two categories are unlikely to spread to other parts of the body. And in all three cases, early diagnosis of the condition generally leads to a complete cure, meaning that being aware of these different cancers is essential.

Skin cancer is the fastest growing form of the condition, with in excess of 1 million new cases diagnosed every year in the USA and hundreds of thousands in the UK and Australia. In fact, bizarre as it may seem, skin cancer is now growing faster in the UK (with a climate that no-one who has ever been there could ever really describe as being 'sunny' without being extremely generous) than it is in Australia, perhaps because the extreme levels of sunshine in Australia have already brought home the dangers of overexposure to most long-term residents.





Of the three forms of skin cancer, BCC and SCC are by far more common than melanoma, which is a very good thing because these are considerably less dangerous forms of skin cancer.

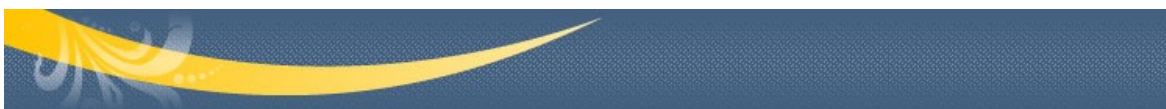
Nevertheless, according to the American Cancer Society statistics, there will be nearly 69,000 new cases of melanoma diagnosed in the USA in 2009, and melanoma will be responsible for perhaps 8650 of the 11,590 anticipated deaths from skin cancer in the year.

The picture in other countries where the growth of skin cancer is alarming is pretty much the same. Around 75% of all skin cancer deaths are caused by melanoma, a particularly aggressive form of cancer that attacks other organs in the body if it is not dealt with extremely quickly.

And as hundreds of websites attest, it is now pretty well indisputable that the main cause of skin cancer is exposure to ultraviolet light and the main source of ultraviolet light to which we are likely to be exposed is the sun or artificial versions of it when we 'enjoy' a tanning booth or a sunbed session.

You have already seen the ACS evidence (i.e. the evidence from an internationally recognized cancer authority) but the information emanating from the UK [Cancer Research Organisation](#) and the [Australian Department of Health and Ageing](#) all tells very much the same story.

Skin cancer is primarily caused by overexposure to ultraviolet light from the sun and therefore, if you protect yourself from the sun, your





chances of contracting deadly melanoma or any other form of skin cancer are significantly reduced.

The light of the sun contains three different types of ultraviolet light, being UVA, UVB and UVC. All three forms of ultraviolet light are in effect a form of radiation, exactly the same kind of thing that you would expect to be subjected to if for example you needed to have a part of your body x-rayed.

When the dangers of ultraviolet light first began to become apparent to scientists and medical professionals, it was [originally suggested that UVB](#) was the danger, but that has since been modified to include UVA as well.

There is now evidence to suggest that both of these forms of ultraviolet light damage the DNA of the body, and it is DNA that controls the healthy growth of cells, including those of the skin. Consequently, because this basic building block of a healthy body is out of shape, it helps to encourage the uncontrolled, disorderly cell growth that we call cancer.

There are many factors that dictate whether you more susceptible to skin cancer than others. If you fall under any of the following categories, it is believed that your skin cancer risk is elevated:

- Those who have fair skin that is easily burned and prone to freckles or other common skin markings.
- People who have suffered at least one case of severe sunburn earlier in life.





- Those who have fair hair and/or blue or green eyes.
- People with naturally depleted skin pigmentation caused by other medical conditions such as [albinism](#).
- Those who have many moles on their skin, especially unusually shaped or colored moles, or large ones that they have had from birth.
- People who have suffered skin cancer before, or have family members who have suffered in the past.

It is important to note that these causative factors can work in combination. If for example you are a fair skinned, red haired, blue-eyed individual with several unusual moles who suffered really bad sunburn a couple of times as a youngster (which with this physical make up is extremely likely), the chances of continued or repeated exposure to the sun causing cancer are a great deal higher.

This highlights one of the main reasons why it is so important to know how to prevent sunburn and how to treat it if it unfortunately happens. Anything that increases your melanoma risk levels is something to be taken extremely seriously. Managing the risk of sunburn before the event is by far and away the best way of treating this risk with the respect that it so obviously deserves.

And remember that sunbeds and tanning booths are in no way, shape or form a safe alternative to exposure to natural sunlight.

In fact, the ultraviolet radiation issuing from sunbeds is considerably higher than that of the sun, which is one of the reasons why more



[health conscious countries like Germany](#) are now passing laws to ban youngsters from using sunbeds. Given that the statistics in Germany suggest that over 4 million youngsters in the country regularly subject themselves to a sunbed session, there are grounds for thinking that the law banning them from doing so could not come a moment too soon.

### **The Vitamin D argument**

Most people are aware that vitamins are essential for good health, and that there are many different types of vitamins which affect different bodily organs and functions. Whilst we are all familiar with the more common vitamins and where they come from such as the presence of vitamin C in citrus fruits, blueberries and vitamin A in dark green and yellow vegetables, many are less well aware of vitamin D for a few reasons.

The first reason is suggested by the fact that most know that you can get vitamin C from oranges and vitamin A comes from broccoli, but they have no idea what foods vitamin D comes from. Secondly, whilst many people could make a recently educated guess at what the more commonly recognized vitamins do, very few would have any idea about the purposes of vitamin D.

To a large extent therefore, vitamin D is the 'forgotten vitamin' in terms of public perception of health and wellness. However, it is in reality an extremely important nutrient that is responsible for many critical medical functions in your metabolism.





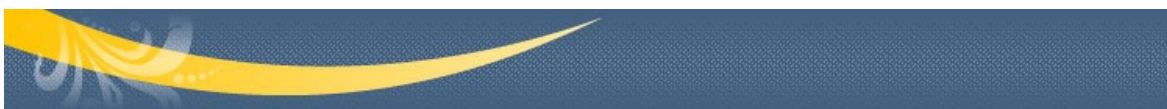
For example, because the primary function of this particular vitamin is to promote healthy calcium flow throughout your bloodstream, you are likely to suffer many calcium related problems if vitamin D is not present in sufficient amounts. Such conditions as brittle and misshapen bones are likely to be a result of vitamin D deficiency, whilst there are also indications that a deficiency may play a part in fibromyalgia, immune system weaknesses and so on.

On top of this, there is plenty of evidence to suggest that [many people suffer psychological problems](#) or [depression](#) as a result of vitamin D deficiency, with most cases of what is known as Seasonal Affective Disorder ('winter depression' or the 'winter blues') being related to a lack of this particular vitamin.

All of this is relevant when considering the positives and negatives of exposure to sunlight (the 'for' and 'against' as it were) because sunlight is absolutely essential if your body is to be able to process vitamin D properly.

Unlike other vitamins, there are surprisingly few foods from which we can get vitamin D and in every case where we do absorb this vitamin from our foods, it is because the food source has not been able to synthesize the substance properly. For instance, although the richest source of the basic building blocks of vitamin D is fish, these fish only contain these elemental nutrients because they were produced by the algae that they have eaten.

It is important to understand that the basic components of vitamin D are essentially inert, inactive until they are activated in your body. And





the primary way that these inert vitamin components are converted into an active nutrient is through the action of sunlight on our skin.

The fact that a significant number of otherwise healthy, happy people suffer depression in the depths of winter when there is no sunlight is evidence of the fact that without sun, we go without vitamin D and perhaps suffer the adverse health effects caused by this deficiency as a result.

Indeed, one of the main forms of treatment for 'winter blues' sufferers is through the exposure to artificial (and extremely low powered) ultraviolet light as this is the only way they can make the necessary vitamin D to stave off these blues until the sun comes out again.

This counterargument to the one presented by the 'skin cancer lobby' has just as much validity as does the other side of the debate. It is undoubtedly a fact that without sunshine, we are not capable of processing vitamin D effectively and that without it, most people will suffer physical health problems, whilst many will also endure psychological difficulties as well.

### **What conclusion should be drawn?**

Having been presented with both sides of the 'is sunshine good for you' argument, I would suggest one thing should be abundantly clear.

Whilst too much exposure to the sun is clearly potentially dangerous, particularly for certain types of people, a lack of exposure to the sun can be equally harmful. Consequently, the only sensible conclusion that





can be drawn from this is that a balance needs to be struck between exposing your body to sunlight and keeping covered up at other times.

Understanding that this balance is necessary is essential if you are going to handle the sun and the potential of suffering sunburn in a sensible but entirely natural way.

You must appreciate that whilst many hours out in the sun stripped to the waist will do wonders for your vitamin D levels, it is also likely to be the precursor to many hours of severe pain and it could possibly trigger a far more serious condition such as melanoma.

Thus, sunshine is something that you need, but not too much of it.







## Your first natural defense against sunburn

What you read of in the previous chapter represents your first natural line of defense against sunburn. If you want to keep your vitamin D up at a healthy level, you must go out in the sunshine sometimes, but when you do so, you should stay reasonably well covered up and should not stay outside for too long either.

Similarly, if you are enjoying the pleasures of playing with the family on the beach in the sunshine, caution should always be the watchword.

For example, in most places, the heat (i.e. the ultraviolet radiation because they are the same) is most intense between 11 AM and 4 PM, so if you want to enjoy the feeling of the sun on your back, it is best to do so earlier in the morning or later in the afternoon when radiation from the sun is less intense.

Even when you venture outdoors at times of the day when the sun is less likely to cause skin damage, you should take protective steps (which will be examined later) and you must always be on the lookout for signs of possible sun damage.

For instance, fair skinned people who are unused to exposure to the sun will often show a first 'flush' or red tinge indicating that exposure to sunlight is affecting them within less than half an hour even if the sun is not fully 'up' or the heat has already gone out of the day.

Remember, every one of us is different so that even when you have two people who might appear as if they should react to the sun in the same way – siblings for example – you can never assume that this is the





reality of the situation. Even close blood relatives react to sunshine in completely different ways which is something that you must always factor into whatever you do to combat the possibility of sunburn occurring.

The bottom line is, your best defense against suffering physical problems caused by exposure to the sun is to limit this exposure by staying indoors.

And you must always err on the side of caution even if you are extremely confident that you and/or your family can deal with the sun without any difficulty, because the stories of sunburn (and sunstroke) victims who have ended up hospitalized after adopting this approach are legion.





## The influence of geography and the seasons

There are people in many countries of the world who are exposed to hours of sunshine each and every day because of where they live or because of the work they do (and the two are not mutually exclusive).

For example, there are many places where the sun is up from dawn until dusk for most of the year and yet the people are still expected to work in the fields each and every day.

Similarly, there are many popular holiday destinations where it is common to see local children playing football and other games on the beach from breakfast until dinnertime with the sun blazing down, and yet they never seem to suffer any significant burns or other skin damage from the sun.

Although it is impossible to generalize as to why this is the case, there are a couple of reasons to put forward to explain it.

Firstly, if you live in a place where the sun is an almost permanent daily feature in your life, it would be very difficult not to get used to it over time.

If you are exposed to regular long 'sessions' in the sun from a very early age and generation after generation of your ancestors have been in exactly the same situation, it seems reasonable to suggest that there has been a degree of 'learned resistance' to the worst effects of the sun over a long period of time.

Secondly, as previously suggested, it is a fact that fair skinned people, those who have light or red hair and/or blue or green eyed individuals





are more likely to suffer physical harm as a result of overexposure to the sun.

To a large extent, this makes a great deal of sense because these physical characteristics are those that are most commonly attributed to individuals who are from or have roots in colder countries where the sun is not such a major factor.

The influence of geography is further emphasized by the fact that there are locations in the world where for long periods every day during the winter, there is no daylight, never mind sunshine. And even when the sun does come out, it does so with less intensity and people are therefore less well adjusted to the effects of the sun.

The intensity of sunlight also increases as you climb to higher altitudes although this does not necessarily mean that the temperature does the same. On the contrary, as anyone who has ever been in an airplane at 30,000 feet will be very well aware, the temperature as you climb higher falls dramatically, which is why even in the midst of summer, the highest mountains in the world will always be covered with snow nearer the summit.

The combination of snow and intense ultraviolet radiation at altitude is one of the reasons why mountaineers can suffer extreme sunburn when they are climbing. In this scenario, the climber has two problems.

Firstly, they are in a situation where the ultraviolet light coming directly from the sun is far more intense because they are closer to it and as a result of a far thinner layer of air above them.





Under normal sea level conditions, the dense layer of air above us filters many of the most harmful of the sun's rays, whereas dirt and pollutants deflect or reflect more of those rays, ensuring that they never reach us. However, at altitude, the protective layer provided by the air is far thinner and as a consequence, far higher levels of potentially harmful UVA and UVB radiation gets through.

At the same time, the snow provides a perfect mirror for this radiation to bounce off which further intensifies the level of radiation, heat and light. This is one of the reasons why mountaineers and people who live at high altitudes are especially prone to sunburn.

Geography, ambient climactic conditions and other physical factors such as altitude all combine together to make some people more susceptible to skin damage caused by the sun, whereas there are other people who through a trick of fate are far more likely to suffer skin damage because of overexposure to ultraviolet light.





## Taking precautions

### **A darkened room is not necessary**

From this point on, I am going to assume that you (or members of your family) are not people who have naturally high sun tolerance and that you therefore need to take additional precautions before going out in the sun, and that you also need to know what to do if a case of sunburn calls for effective natural treatment.

As suggested previously, the most effective way of avoiding sun damaged skin is to stay out of the sun. However, this does not necessarily mean that you have to stay indoors every time the sun comes out, because there are other sensible precautions that you can take even though you have ventured outside.

For example, knowing that there are times of the day when the intensity of the ultraviolet radiation from the sun is at its highest, you should always seek shade of some description at these times. If you are on the beach with your family (or even if you are on your own), make sure that you have a clear idea of places where you can find shade at the hottest times of the day or if there is nowhere that offers natural shade, take a beach umbrella with you or hire one if it is possible to do so.

Initially, you can enjoy the warmth of the sun without exposing yourself to the direct ultraviolet radiation that causes skin damage. This allows you to get the positive benefits of being out in the fresh air (especially if you are bathed by a gentle sea breeze) without exposing yourself to the



unnecessary risk of suffering sunburn from overexposure to UVA and UVB rays.

The problem with this scenario is that whilst for an adult who understands the danger of overexposure to the sun, it is probably no great hardship to be sitting under a beach umbrella or at a covered beach bar sipping an ice cold drink, it might be far more difficult to convince youngsters and children of the benefits of staying in the shade.

After all, staying still at any time is difficult for the majority of children, so expecting them to sit quietly when the pleasures of playing on the beach and splashing in the sea are right in front of their eyes is pretty unrealistic. It is therefore essential that even in this situation, where adequate shade is available, you must make sure that all family members are suitably protected against the worst effects of the sun with sunblock or some other suitable substance. However, when you want to use commercially sun protection is another matter entirely.

### **Investigating sun protection substances more closely**

Every commercially produced sun protection cream, lotion, spray or gel that you apply to your skin to protect against the sun has a [Sun Protection Factor](#) or SPF number attached to it.

The SPF figure related to the particular product that you are planning to protect your skin or that of your family with gives you some indication of how much protection that particular product offers.





When buy a sun protection product, you are either going to buy a 'sunscreen' or 'sunblock' solution and the constituent ingredients of the two different types of some protection product are a little different. To understand this concept, you must first of all appreciate that there are two different groups of sun protection ingredients which display different qualities.

On the one hand, you have ingredients that constitute a chemical ultraviolet block, something that has the capacity to be absorbed into the skin which protects you by nullifying or invalidating the potentially harmful effects of ultraviolet light on contact with the skin.

On the opposite side of the coin, there are physical block ingredients which do not have the capability of being absorbed into the skin. However, these physical blockers protect the skin either by absorbing the potentially harmful elements of sunlight into the block (a little like a sponge soaking up and then retaining water) or by reflecting those harmful elements away from the body in a similar way to using a mirror to reflect sunlight.

A commercially produced sunscreen product will generally tend to use more chemical ultraviolet protection ingredients, and has an SPF factor of 2 or more. Incidentally, an SPF factor 2 protective product would not offer a great deal of protection at all as the bigger the SPF number is, the more protection is provided.

On the other hand, a sunblock product is one that uses physical blocking ingredients to protect against sunlight, and it will have an SPF





of 12 or more, which is obviously a far higher level of protection than that required of sunscreen products.

The SPF number is designed to indicate how much protection that particular product offers against UVB light with reference to how much of this particular form of ultraviolet light is necessary to turn the skin of an 'average' person red. And whilst it is impossible to know how you compare with this hypothetical 'average' individual, it is generally suggested that the protection offered is the number of minutes that you can spend in the sun when the SPF factor is multiplied by 10.

As an example, an SPF factor 12 product would allow our hypothetical average friend to stay in the sun for 120 minutes (12 x 10 minutes), whereas a factor 20 product would offer him or her 200 minutes of sun time.

The upshot of this is that a sunscreen or sunblock product that is SPF1 is going to allow skin that has not been exposed to the sun for a long time to turn red in 10 minutes or so, whereas something that carries an SPF50 label is going to prevent sun induced redness for a very long period of time.

However, do remember that these time guidelines are nothing more than a general idea of how long you can stay out in the sun, so don't make the mistake of thinking that you can enjoy every last minute of your 'available sun time' irrespective of how you feel.

Nevertheless, although the SPF rating system is designed to provide a guideline about how much UVB light anyone who has used a particular





sun protection product can tolerate, many products now also include ingredients to protect against UVA light as well. This is as you would expect given that there is now a strong suspicion (or even believe) that UVA radiation is also responsible for causing skin damage and cancer.

The problem with most commercially produced sunscreens and sunblocks is that the majority use a wide range of chemical ingredients to make up their particular brand mix, and there are suspicions that not all of these ingredients are necessarily safe.

For example, there is a very comprehensive list of all of the most common commercial sun protection products in the USA and Canada on the [Drugs.com](http://www.drugs.com) site (even outside the USA and Canada, many of these products will be instantly recognizable).

Next to each product listed, there is a key to the main chemical ingredients in each product listed. This example is the top of the US section of the page, with the key number highlighted for the top two entries:



Some commonly used brand names are:

**In the U.S.—**

- A-Fil [33](#)
- Aquaderm Sunscreen Moisturizer [49](#)
- Aquaray Sunscreen [42](#)
- Bain de Soleil All Day For Kids [38](#)
- Bain de Soleil All Day Sunfilter [39](#)
- Bain de Soleil Mega Tan [34](#)
- Bain de Soleil Orange Gelee [41](#)
- Bain de Soleil Sand Buster [41](#)
- Bain de Soleil SPF + Color [34](#)
- Bain de Soleil Tropical Deluxe [41](#)

Click on any of these numbers next to a particular brand of sun protection products and you will be redirected to the bottom of the page where there is an indication of the main ingredients in the product. In the majority of cases, these are chemical ingredients, but there are some natural ingredients highlighted as well.

However, with some further investigation, it becomes apparent that some of the best-known commercial brands of sun protection products are using ingredients that are controversial to say the least. For example, products that are assigned keys 44-46 contain these ingredients:





44. Octyl Methoxycinnamate, Octyl Salicylate, Oxybenzone, Padimate O, and Titanium Dioxide (OK-til meth-ox-ee-SIN-a-mate, OK-til sal-i-SIL-ate, ox-i-BEN-zone, PAD-i-mate Oh, and tye-TANE-ee-um dye-OX-ide)†
45. Octyl Methoxycinnamate, Octyl Salicylate, Oxybenzone, Phenylbenzimidazole, and Titanium Dioxide (OK-til meth-ox-ee-SIN-a-mate, OK-til sal-i-SIL-ate, ox-i-BEN-zone, FEN-ilbenz-i-MI-da-zole, and tye-TANE-ee-um dye-OX-ide)†
46. Octyl Methoxycinnamate, Octyl Salicylate, Oxybenzone, and Titanium Dioxide (OK-til meth-ox-ee-SIN-a-mate, OK-til sal-i-SIL-ate, ox-i-BEN-zone, and tye-TANE-ee-um dye-OX-ide)

Every one of these products contains titanium dioxide, a very commonly used substance that is found in paper, paints, plastics and ink as well as toothpaste because of its opacity and whitening qualities.

However, according to this article published on the [Canadian Center for Occupational Health and Safety website](#), titanium dioxide is now classified as an IACR Group 2B carcinogen by the [International Agency for Cancer Research](#) which officially means that it is a 'possible carcinogen to humans'.

Titanium dioxide is a substance that is used in many commercially produced sun protection products including many that are recommended or specifically designed for babies and children. And whilst there is no specific proof that the substance is a proven either here or you will you are that you are a cancer threat to human beings, it is reasonable to suggest that the IACR would not have issued this warning without sufficient grounds for doing so.

If you run through this list and then do some more online research into the potential adverse side-effects of some of the chemical ingredients that are used in commercial sun protection products, you will find many



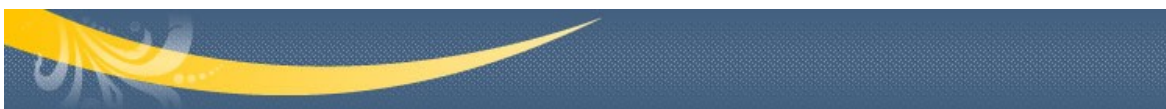
similar stories about other chemicals. There are a couple more examples [here](#) and [here](#) just in case the idea of trying to protect your skin against sunburn, melanoma and other skin cancers by applying 'protection' that contains ingredients that could potentially cause cancer does not give you enough food for thought.

There is another relevant factor to take into account here as well. The result of an [experiment which was published in 2006](#) compared the level of [reactive oxygen species](#) (ROS – free radicals that are known to have a connection with cancer) on skin that had been treated with a sun protection product as against skin that had no such protection.

During the first 20 minutes of the test, the protected skin fared much better than the skin which had not been treated with considerably lower levels of ROS shown. After 60 minutes however, the amount of sunscreen that had been absorbed into the skin meant that the level of ROS present on the treated skin area was now considerably higher than that of the non-treated control skin.

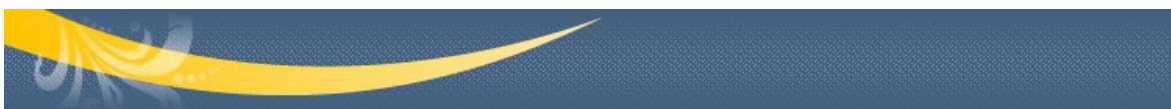
From all of the preceding information, it is clear that there could be some degree of risk attached to using commercially produced sun protection products as there is at least evidence to suggest that some of the chemical-based ingredients are not necessarily 100% safe in all situations and circumstances.

Of course, the individual level of risk to the vast majority of people from using preparations that contain chemical substances that have been indicated to have potentially adverse side-effects is extremely small, because it is a fact that thousands (perhaps even millions) of sun lovers





all over the world use these products each and every day without any deleterious reactions whatsoever.





## Prevention is always better than cure

### **Other factors that can make you more susceptible**

As suggested earlier, if you and your family are planning on going out in the sun, the best way of preventing sunburn is to avoid putting yourself in a situation where the sun has the opportunity of burning you.

For example, I have already highlighted the fact that you cannot suffer the worst effects of the sun when you're indoors, and that seeking shade when you are outdoors is always a good idea. Moreover, you know that the sun is going to be more intense at certain times of the day, so you should either avoid those particular times or at least make sure you are well shaded when the sun is turning up the ultraviolet meter to the maximum.

If you are walking in the sun at any time, always wear a wide brim hat or at the very least a cap of some description. The ideal arrangement is to have headgear that also protects the back of your neck as well because having the sun beating down on the back of your neck for a long period of time is a very effective recipe for suffering sunstroke!

Wear sunglasses as well because the intensity of the light when you are unused to the sun could cause damage to your retinas and of course, you should never stare straight at the sun even if you are wearing the strongest sunglasses imaginable.

Whenever you are outdoors, you should constantly monitor your condition and that of any family members who are with you. Make sure that everyone is well hydrated at all times because even in the shade,





you can lose a significant percentage of your bodily fluids through perspiration.

Do not make the mistake of waiting until your skin starts to turn red before seeking the sanctuary of shade. The fact that you are going red indicates that your skin has already suffered some damage, so you should always attempt to get out of direct sunlight before the reddening process begins.

You also need to be aware that if there is a breeze or wind, it can often disguise the heat and intensity of the sun. Because the wind naturally has a cooling effect, it can mask the fact that the sun is actually burning your skin, so you must be particularly careful in breezy or windy conditions.

Another thing that you should always bear in mind if you are not especially familiar with sunlight is that you should build up your exposure to the sun gradually.

When you expose your skin to the sun, a skin pigment known as melanin absorbs the sun's rays and offers protection against sunburn. Melanin is a relatively dark pigment, meaning that if your skin is white, there is a noticeable lack of it.

You therefore need to build up your exposure to the sun gradually so that your skin acquires a little more melanin protection each and every day as it is the presence of dark colored melanin that gradually builds up protection over time. It is however also rampant melanin







malformation that causes melanoma, which is another reason for being extremely careful by building up your exposure to the sun very slowly.

And of course, it should go without saying that the fairer your skin is, the slower you should build up your daily exposure to ultraviolet light as it should be obvious that it is far easier to burn when you have little or no natural melanin protection.

Some prescription and over-the-counter drugs such as certain antibiotics can make some people more susceptible to the more adverse effects of the sun. Consequently, if you are taking some form of drugs and you find that you seem to be more susceptible to the sun, you may want to discuss the problem with your doctor if he (or she) has prescribed the drugs, or stop taking them if they are over-the-counter remedy.

Everything that you have read so far in this chapter is an important consideration for protecting yourself and your family against the worst effects of ultraviolet radiation from the sun.

However, one factor that is hardly ever given any thought when considering natural ways of protecting yourself against the worst effects of the sun is your diet, whereas in truth, making sure that your diet keeps you in tiptop physical condition is one of the best ways of protecting yourself.

Unfortunately, it is a fact that the majority of commercially produced mass market foods that we consume nowadays are low in vital nutrients such as vitamins, minerals and other trace elements, whereas they are





conversely high in substances that are harmful to our health such as saturated fats.

At the same time, the majority of people consume far too few fresh fruits and vegetables whereas there are more than happy to eat processed, fast and junk food without really giving it a second thought.

Having a poor diet inevitably compromises the ability of your immune system to keep your body in prime physical condition. Furthermore, as it is your immune system that fights against illnesses, disease and other medical problems like infections, you are naturally more susceptible to the potentially harmful effects of the sun if you are not supporting your immune system through your diet.

Hence, instead of consuming processed foods, you should pay far more attention to including foodstuffs that contain significant amounts of the major antioxidant nutrients and elements.

You should therefore increase your consumption of foods that contain vitamins C and E, essential fatty acids like Omega-3 and Omega-6 from oily cold water fish (such as mackerel, herring, salmon etc), carotenes (in carrots) and above all else, garlic.

Garlic contains over 100 provably beneficial natural chemicals and compounds. It is also one of the most powerful [natural antioxidant and antibacterial foods](#) known to man. In tests, it has been shown that increasing the amount of garlic you consume can significantly reduce the levels of low-density lipoprotein in the blood, which is a significant



benefit as this is the scientific tag for the 'bad' cholesterol that can kill you.

As everyone who has ever even garlic will testify, it is a fairly strong tasting (and obviously smelling) food that not everyone loves. However, as you can obtain garlic in odorless capsule or tablet form which do not cause you to taste garlic or suffer other 'side effects' such as belching, there is no excuse for not including garlic in your daily diet.

Another highly beneficial way of altering your diet to prevent the sun having anywhere near as much of an adverse effect on you as may have happened previously is to increase the amount of organic fruit juice you consume every day. This is an extremely efficient way of raising the amount of essential vitamins and nutrients that are included in your diet which for the majority represents a particularly delicious way of doing so.

Perhaps it seems surprising that boosting your immune system by improving the quality of your daily diet should be such a major factor in upping your ability to resist the worst the sun can throw you, but if so, it shouldn't be.

Whilst most people who ever give it a moment's thought would probably focus on their immune system as being the center of their protection system against disease, it is far more than this. In fact, your immune system forms your primary defensive barrier against all forms of harm and damage and this includes protecting you against the sun.





Consequently, if you want to improve your capacity for withstanding the sun and perhaps thereby enhance your ability to enjoy extended exposure, you must focus on doing so from within. Remembering that we are all the sum total of everything we eat and drink, it should be evident that your diet plays a significant role in helping you to maintain maximum natural levels of detection against ultraviolet radiation.

### **Natural sunscreen products and recipes**

When all is said and done, it is never going to make much sense for a fair skinned individual to expose themselves to the sunlight for any extended period of time without some form of protection.

Clothes will obviously protect you from the sun (there are even [special clothing brands](#) that are specifically designed for the purpose) as do hats and sunglasses, but what about your exposed skin given that there may be risks attached to commercially produced sunscreen and sunblock products?

The obvious answer is to turn to natural sun protection products, of which there are many on the market. Many of these natural protection products are available in High Street health stores and some more enlightened pharmacies, but before deciding to spend your money on these products, I would suggest that you do a couple of important things.

Firstly, most of the natural sun protection products that can be bought in a local store can also be bought over the internet. Consequently, there are many sites where you can find a good deal more information





about these products than you would ever be to find in your local store which will enable you to make a more informed decision about whether you want to spend money on them or not.

For example, as highlighted on the [Health Hype site](#), some sunscreen products that are 'allegedly' natural contain exactly the same potentially dangerous chemicals like titanium oxide that was highlighted earlier. The site also casts serious doubt on claims made by some sun protection products that they are 'organic' as well.

You can also look up information about individual natural sun protection products on the website of the product manufacture as well, because most reputable manufacturers of natural products will provide information about the ingredients of their product on the site.

In this way, you can do your due diligence regarding the individual ingredients to ascertain whether this is a product you want to use on your own skin or on that of your family.

As an example, the FAQ page of the website for [Badger Natural Sunscreen](#) (which many independent sites rate as a top natural product, a contention which a recent rating as being amongst the top 1% of 1600 comparable products tends to support) shows that the main ingredients is micronized zinc oxide in combination with other protective elements such as extra-virgin olive oil, jojoba oil and the like.

Knowing this allows you to do your research before deciding whether this is a product that you would be happy to buy and use.





Depending upon your views or position regarding these commercially produced natural sunscreen products, you may like to consider another alternative, which is to make your own.

In this way, you can exert absolute control over everything that you use and because natural, home-made sun protection solutions can be every bit as effective as those that you might otherwise have to spend a significant amount of money on.

Over the past couple years, I have read many different 'recipes' for home-made sunscreen and the majority seem to have a surprising degree of commonality in that the same ingredients are recommended time and again. This is generally a good thing because it implies that these ingredients do a good job, and certainly in my experience, I have no complaints so far.

What I have therefore done is detail one simple and one slightly more complex version of what is essentially the same kind of recipe below so that you can experiment with both to see which is most suitable for (and offers the greatest protection to) you and your family.

### **An easy home-made sunscreen**

To make this simple and easy home-made sunscreen, you need olive or almond oil, beeswax and zinc oxide which you will find in the baby department of most leading department stores (it is commonly used to help baby get over nappy rash).

Slowly heat a cup of oil on low heat as you do not want the oil to boil at any point. At the same time, crumble 1 ounce of beeswax before adding



it to the oil which should be kept on a low heat until it gently melts the wax. Incidentally, you can use any olive oil that you buy in the local hypermarket or store whereas beeswax can usually be obtained from a health store or [on the net](#) (search Google for 'buy beeswax' to find more local alternatives).

Once the wax has completely melted, remove the mixture from the heat and immediately drop in two tablespoonfuls of the zinc oxide. Allow the mixture to cool a little further before storing it in an airtight container which you can keep in the fridge for several weeks.

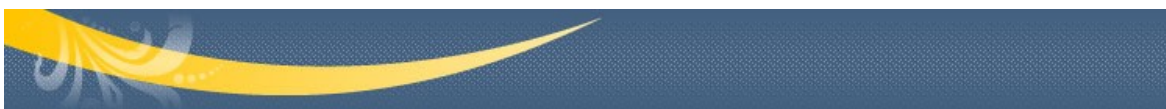
When you use the mixture, you may find that it has separated in which case you may need to agitate or stir it to remix everything before applying it to your skin.

And with this mixture and the one that you make using the following recipe, you should take the sunscreen out of the fridge 15 to 30 minutes before using it to ensure that you can mix it properly before applying (it's also far less cold as well!).

### **A more complete home-made natural protection**

As this 'recipe' version contains considerably more ingredients, I am going to list them in a traditional 'cookbook' fashion:

- 2 tablespoons of coconut oil;
- 2 tablespoons canola oil;
- 2 tablespoons avocado oil;
- 2 tablespoons sesame oil;





- 6 tablespoons lavender hydrosol;
- 6 tablespoons aloe vera gel;
- 6 tablespoons shea nut butter;
- 6 tablespoons beeswax, grated;
- 1 teaspoon borax powder;
- 1 teaspoon vitamin E powder or 2 gel capsules.

Mix the grated beeswax with all four oils and the shea nut butter until the wax melts, once again taking great care to make sure that the oils do not come to the boil. Next, warm the aloe vera and lavender in a different pan before adding the vitamin E and borax powder and mixing the whole as thoroughly as possible.

Once the latter mixture is smooth and there is no evidence of lumps or clumps, mix it with the oil, wax and butter and whip or whisk the whole lot together until you have a reasonably light, creamy textured solution. Allow the mixture to cool before storing it in an airtight container which you can keep in the fridge.

As in the previous example, this mixture will keep for a number of weeks but this recipe makes a really healthy amount of natural sunscreen, so you may need to preserve the solution for more than just a few weeks depending upon how often you use it.

In this case, adding a few drops of a natural preservative like grapefruit seed extract will enable you to keep the refrigerated solution for up to





12 months, although you should of course keep an eye on the mixture to check on its stability every now and then.





## Dealing with sunburn naturally

### **Sometimes it might be serious...**

Having read this far, you know that the best way of dealing with sunburn naturally is to prevent sunburn occurring by staying indoors, keeping out of direct sunlight for anything more than the shortest period of time whilst staying in the shade as much as possible, wearing a suitable hat and a shirt or t-shirt, etc.

So, you know all this and yet there is still a good chance that you will suffer sunburn at some stage because however much we know about 'sunshine safety', we all make mistakes from time to time (and I willingly include myself in this group).

For example, whilst it is something of an apocryphal seaside postcard and TV comedy show standby, people really do fall asleep in the sun and there is many an individual who still has the painful memories (and perhaps even in the most unfortunate cases, the scars) to prove it.

This brings us to the first important point about sunburn that you must take on board. Whilst this chapter is going to highlight many natural remedies for mild or minor sunburn, if you suffer serious sunburn, you need to seek medical attention.

As a general rule, the effects of sunburn will start to become painfully apparent anywhere between one hour and four hours after you have come inside and if during that time you begin to notice (or suspect) anything other 'normal' sunburn pain, you should get to the doctor as quickly as you can see to seek professional advice.





Whilst it would be possible in a perfect world to treat every medical condition, no matter how severe or serious it is in a completely natural way, it is an unfortunate fact that this is just not the way the world is. There are times when you need to seek medical attention, and if you have reason to suspect that your sunburn could be serious, this would be a perfect example.

If for instance you feel lightheaded, disorientated or dizzy, this may be a sign of serious sunburn or even sunstroke. Similarly, if the burned area starts coming up in blisters very quickly, you have a serious case of sunburn and there is also the risk of infection if any of the blisters bursts or starts to weep, so you must get to the consulting room or surgery as soon as possible.

### **If it is not so serious...**

Fortunately for most people who suffer sunburn, their condition is not particularly serious, although there is no doubt that it is not particularly pleasant either.

Nevertheless, unless you really overdo the sunbathing or tanning booth sessions, it is not that likely that your sunburn condition is going to cause any serious or long-term medical problems. Consequently, this will generally mean that you can deal with the problem yourself or with help from a friend or family member.

If the reason that you have been exposed to the sun is because you are attempting to acquire a suntan and assuming that you are a fair





skinned individual, then a slight redness to your skin after you have finished indicates that you are going in the right direction.

However, if your skin continues to become increasingly red after you have finished your sun session and the pain or itching from that particular skin area inexorably increases, then you may have overdone it and burned yourself.

Really, the major giveaway here is the pain because pain is your body's way of telling you that you have overdone it or that something has gone seriously wrong with some part of your body. In other words, pain is a messenger and the more pain there is, the more you need to pay attention to the message.

If you have been burned or even if you suspect that you might have before the onset of pain confirms your suspicions, one of the first things that you can do to attempt to relieve the situation is take a nice cool shower.

As you will probably know if you have ever suffered sunburn, an area of the skin that has been burnt by the sun feels hot to the touch and a cool shower can help to reduce this heat. However, if the burned area is already becoming painful, you should avoid using a shower that throws out water at too high a pressure as the impact of the water on the burned area could make the pain worse.

Another 'first reaction' option is to take a cool bath as immersing yourself in almost cold water can again alleviate the stinging, itching sensation that is a common side-effect of sunburn.





In my experience, either immersing yourself in a cool bath or taking a cool shower as soon as you come inside from the sun (or return from the tanning salon) serves another extremely important purpose as well.

One of the most unpleasant side-effects of suffering sunburn is that the burned skin dies and ultimately peels off, which in a worst case scenario can lead to permanent scarring. Cool water helps to reduce this which is another reason to use this as a first line of defense strategy if sunburn is starting to become evident or it looks like it might later on in the day or evening.

A further variation on the idea of using water to calm your sunburn problem is to add a cup of baking soda to a lukewarm bath before soaking in the water for 30 minutes or so. Many people report that this is a very effective way of taking the heat out of sunburn, thereby reducing the inevitable pain that is associated with the condition.

Another very commonly used natural solution that is recommended for dealing with sunburn is to apply aloe vera to the burned area.

Whilst this plant extract is very effective for cooling and soothing sunburned areas of your body, you do need to make sure that the product you are using is very high in aloe vera itself and that it not just a trace of aloe vera made up with lanolin (or something like it) as many products are.

This is important because there is some evidence that whilst lanolin helps to cool the burned area in the initial stages, it can actually exacerbate the pain later once your body has warmed the solution.





Hence, you should avoid lanolin-based sunburn sprays and creams and you must read the label if you buy an aloe vera product to ensure that it is as near to being pure aloe vera cream or gel as possible. In fact, the best aloe vera sunburn solution is to use the leaves and stalk of the plant itself to alleviate the pain and itching by breaking them to release the soothing extract before applying that broken plant section directly to the burned area.

Some people who have suffered sunburn swear by the idea of using a milk compress to soothe the pain on the basis that the fat and lactic acid in full fat milk combine very effectively to relieve the pain. In this scenario, you soak a suitably sized soft cloth in cold milk before dabbing the cloth on the burned area before rinsing the burned area with cool water and drying it.

However, when you dry it, do so with a gentle dabbing motion rather than rubbing it with the towel as this will irritate the skin. Also note that this only works with full fat milk as the fat seems to be a vital ingredient in the soothing property of this strategy.

Cool fresh yoghurt straight from the fridge is another sunburn solution that many people find to be very effective. In this case, it is a question of applying the yoghurt to the burned area for 10 or 15 minutes before rinsing it off with cool water. As a variation, you might like to try adding cucumber to the mixture as this is said to enhance the pain and irritation soothing qualities of the yoghurt.

And if there is no fresh yoghurt available in the fridge, mayonnaise may serve a similar purpose and can be used in the same way.



Tea is another liquid that is said to bring relief to mild to moderate sunburn. In this case, make a strong brew of tea by using several teabags and boiling the water until it turns a rich, strong brown. At this point, remove the tea from the heat and allow it to cool to lukewarm before soaking a towel in the liquid. Next, apply the soaked towel to the burned area, making sure that there is another towel in the appropriate position to catch the drips, as the strong tea does have the capacity to cause stains.

Although the tea is slightly lukewarm, most people who have tried this solution report that when it is applied to a sunburned area, it feels extremely cool and soothing.

Consequently, you could leave the tea soaked towel in situ for 30 minutes, although if pain relief starts to dissipate, you can re-soak it in the lukewarm solution before re-applying. It is believed that the sunburn soothing qualities of this tea method is a result of the amount of tannins in the drink, but whatever the reason is, it seems to work.

Applying essential oil of lavender is another sunburn solution that many people swear by. Indeed, it is sometimes suggested that lavender will draw the pain out of slightly more serious sunburn as well, although in this case, you probably need to avoid touching the burned area as skin to skin contact is likely to hurt.

Instead, drip the oil onto the burned area and gently spread it using a tissue instead of your fingers. Allow the oil to do its work for 30 minutes or so and you should find that the pain from the burn has decreased noticeably or even disappeared altogether.





Another essential oil solution that you might want to try is to mix one part tea tree oil with 10 parts olive oil (or another appropriate carrier oil and) before soaking a soft cloth to dab the mixture onto the burned area. The healing and soothing qualities of [tea tree oil](#) have been relied upon by the indigenous peoples of Australia as a cure for a wide range of medical conditions for hundreds (or more likely, thousands) of years. The qualities of this oil have become increasingly widely recognized as it is now established that it has strong antibacterial, antifungal and anti-septic qualities, all of which will help to minimize the pain and damage caused by sunburn.





## Conclusion

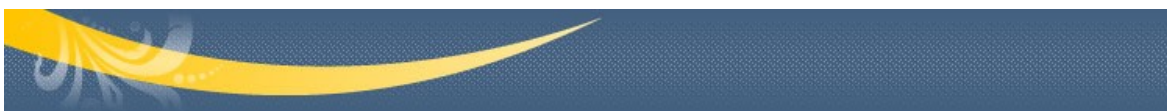
As I have suggested on many occasions in this book, the best natural solution for sunburn is to avoid getting sunburned in the first place. Whereas there are thousands of medical conditions and ailments that you can do little about avoiding completely, sunburn and the misery it brings with it is totally avoidable with nothing more than the application of a bit of common sense and caution.

Furthermore, it is hard to imagine anything more natural than staying in a relatively cool house or apartment to avoid the worst excesses of the midday sun. Even sitting under a huge beach umbrella or at a shaded beachside bar with a cool drink in your hand seemed a pretty natural way of enjoying yourself to me, so there really is no need to suffer the miseries of sunburn.

Unfortunately however, none of us is perfect and we all make mistakes because it's a pretty reasonable bet that if we didn't, no-one would ever suffer sunburn in the first place. Hence, if you are unfortunate (or forgetful) enough to overdo it and you do get burned, don't feel too bad about it or beat yourself up too much because we have all been there and done exactly the same thing at some time in our life.

There are two final points of importance that I want to leave you with.

Firstly, always remember that if you treat the sun with the respect it deserves and never try to push the envelope just a little bit further (by staying out an extra 10 minutes for example), you will never go far wrong.





Secondly, if you do get burned and it is or appears to be becoming a serious case of sunburn, you should seek medical attention. As suggested previously, whilst using natural solutions for medical problems should always be the first option of choice, there are some times when medical advice is necessary, and this is one of them.

Of course, if you never suffer sunburn, this second 'advisory' will never apply to you, so be careful and you should never have to suffer the abject misery that sunburn can bring.

