

Activity 6: What influences you?

Aims

- To investigate the factors which influence SunSmart behaviour.
- To identify the barriers which inhibit the adoption of SunSmart behaviour.
- To identify role models who influence SunSmart behaviour.
- To investigate the influence of the media on SunSmart behaviour.

Assessment outcomes English 4.7; H&PE 4.3

Reference fact sheets Fact sheet 7: Sunscreens
Fact sheet 8: Hat guidelines for schools
Fact sheet 9: Sun protection from clothing
Fact sheet 6: Suntan and sunburn information

Worksheets Worksheet 6A: What influences you?
Worksheet 6B: Fashion and the media
Worksheet 6C: The media

Teacher guidelines

1 In small groups ask students to identify various practices that are an important part of SunSmart behaviour. These could include:

- use of SPF 30+ sunscreen
- wearing a SunSmart hat
- staying in the shade between 10 am and 3 pm DST
- wearing SunSmart clothing i.e. long sleeves with close-knit weave
- wearing sunglasses in summer
- remaining indoors between 10 am and 3 pm DST.



2 Ask each group to identify influences (personal, social, family and cultural) that encourage or discourage adolescents to adopt SunSmart behaviour.

3 Role models

Role models influence an individual's behaviour e.g. sports personalities, pop stars etc.

As a class, or in groups:

- a) Discuss family influences, as the first role models are parents.
- b) Discuss who their role models are and why. Examine these role models and decide if they are good models for SunSmart behaviour.
- c) List people in the public eye who are SunSmart and discuss what they do to be SunSmart. If a role model does not exhibit SunSmart behaviour, suggest what changes need to be made.
- d) Complete a literary exercise: write a letter to a role model who you admire, explaining why they should exhibit sun safe behaviour for their own personal health, and because they influence others.

Activity 6: What influences you? (cont.)

- 4 Complete Worksheet 6A: What influences you? for a chosen SunSmart behaviour e.g. wearing long-sleeved shirts. Students should be encouraged to formulate 'influences' by themselves, however a set of examples is listed for use if required.

Positive forces		Negative forces
Fear of melanoma	Current behaviour	'Brown is beautiful' fashion
Sunscreen advertising		Belief that tans are healthy
Dislike of wrinkled skin/fear of premature ageing		Sunny resort advertising
Desire to avoid sunburn		Solarium industry
Hats and hat-wearing are more fashionable		Belief that tans make it easier to enjoy outdoor life
Availability of shade		Laziness
Fear of other skin cancers		Desire to show off body
		Lack of adequate shade
		Cost of sunscreens
		Tanned role model

- 5 Complete Worksheet 6B: Fashion and the media.
6 Complete Worksheet 6C: The media.

Extension activity – media role play

After completing the media investigation, students could plan and perform a short scenario using one of the scenes depicted on a chosen TV program.

In the role play use the following guidelines:

- set the scene using the TV program scenario as a base
- include behaviours that relate to sun protection
- incorporate strategies for increasing sun protection.



Worksheet 6A: What influences you?

- 1 Identify a SunSmart behaviour such as wearing a sunscreen or use of hats and write it in the centre box.
- 2 Discuss issues that encourage adolescents to be SunSmart and complete the 'positive' forces.
- 3 Discuss issues that discourage adolescents to be SunSmart and complete the 'negative' forces.
- 4 Collate the positives and the negatives on the board.

Positive forces	Your SunSmart behaviour	Negative forces
Fear of melanoma		

Questions

- 1 What are the influences that form the negative barriers? Do they originate from personal, family, social or cultural factors?

- 2 Each group should choose two of the negative influences and develop some strategies that may help them to overcome these influences e.g. lack of adequate shade:
 - Choose to go to shadier venues or shadier areas wherever possible.
 - Put submissions to school board for permission for class to plant shady fast-growing trees in areas needed, or request the placement of sail cloth shades to cover areas where students gather.
 - Negotiate with sporting club on providing shade at sporting venues.

Write your strategies on the back of your worksheet.



Worksheet 6B: Fashion and the media

The influence of fashion trends is not new. The following examples show that in the past people went to extraordinary lengths to ensure they had a fashionable look. In the 19th century and earlier, being as pale as possible was desirable in certain countries, particularly in some western and European nations. If you were tanned, it meant you spent time outside doing manual labour such as farming. Only the wealthy could afford to have other people do that work for them. So the paler you were, the richer you seemed. Among aristocracy it was considered quite vulgar and indecent to have suntanned skin or freckles. A woman always covered up when outside using capes, umbrellas, scarves and gloves.

Read the following information about practices used in the past to gain a pale complexion.



Louis XIV (B 1638 – D 1715)

This is an ancient recipe for a cream from the court of Louis XIV, ruler of France from late 17th century to early 18th century. It was put on people's faces to give them a pale look. Scrape 6 juicy raw carrots and ½ a pink beetroot, squeeze the juice out through a muslin bag and put it aside. Take 3 ounces of finely powdered cornstarch, mix it with the carrot and beet juice, expose it to the sun and stir occasionally until fluid evaporates, leaving the tinted starch dry. Sift through a piece of silk gauze and add: powdered Venetian talc (300 grains), powdered lycopodium (300 grains), powdered bergamot (45 grains) and powdered bismuth (7 grains). Sift grain and keep in a sandalwood box.



Elizabethan era 1558–1603

Some Elizabethan women highlighted their delicate, translucent skin by painting over the veins on their forehead with blue paint.

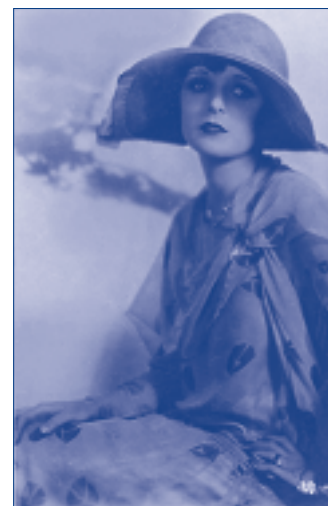
People even applied lead oxide or arsenic to the skin to achieve the European and Asian fashion trends of previous centuries. For example vinegar and powdered lead were applied to the face. The mixture eventually ate away the skin and required thicker layers be applied and it did result in an earlier death. However it ensured a fashionably pale look back in the 1400s!



1700s



*Frances Loockerman
1803*



Early 1900s

Worksheet 6B: Fashion and the media (cont.)



Coco Chanel

A new look

Things changed in the 1920s, when the designer Coco Chanel returned from a vacation to the French Riviera with a deep tan and started a new fashion craze. Suddenly, tans were a sign of the rich who could afford to go on luxury holidays and follow the summer sun.



2006

Fashion trends today

When you look back at fashions, some of the trends were quite weird, totally crazy or just plain silly! We can look at them now and wonder what they were thinking and laugh.



Answer the following questions:

- 1 What is a fashionable look for skin colour in Australia today?

- 2 Who has a big influence in keeping this fashion popular?

- 3 How do people achieve this look?

- 4 Does this fashion have any impact on people's health?

Worksheet 6B: Fashion and the media (cont.)

- 5 What suggestions could you make to young people to help them to try and wear fashions that protect them from the sun?

- 6 Imagine that you are writing an article for a magazine in 2060 about fashion trends in Australia today.

- What would you say about people and their passion for tanning today?
- How did their ideas of a fashionable tan have an impact on their health?
- How have we learnt from the people back then? Are we any smarter in 2060?
- What are the trends in 2060?

Some useful websites to help with your article:

- Australasian College of Dermatologists: <www.dermcoll.asn.au/>
- Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Radiation Basics: <www.arpansa.gov.au/index.htm>
- The Cancer Council Australia: <www.cancer.org.au/SunSmart>
 - ACT: <www.actcancer.org/SunSmart.htm>
 - SA: <www.sunsmart.org.au>
 - Tas: <www.cancertas.org.au/pages/sunsmart.php>
 - Vic: <www.sunsmart.com.au>
 - WA: <www.cancerwa.asn.au/sunsmart/>
 - Qld: <www.qldcancer.com.au/>
 - NT: <www.cancercouncilnt.com.au/>
- World Health Organisation (WHO) Ultraviolet Radiation: <www.who.int/en/>
- Solariums: Fashion to Die For: <www.health.vic.gov.au/environment/radiation/solarium.htm>



Worksheet 6C: The media

People are very influenced by the media in terms of their look, behaviour and attitudes. For example outdoor living and dressing in brief clothing is heavily promoted in the media at the moment. Young girls in particular look up to stars such as Paris Hilton and Britney Spears who are often pictured in skimpy clothing with very tanned skin. To understand the far reaching effects of the media can be difficult because we are often unaware of the many forms of media that influence our lives.

Part 1: Discussion questions

- 1 List different types of media that influence our lives.

- 2 Which type do you think has the most powerful influence?

- 3 What images or information have you seen or heard that promote SunSmart messages?

- 4 What images or information have you seen or heard that do not promote SunSmart messages?

- 5 Outline ways the media could portray more positive messages about being SunSmart.

Media investigation

- 1 Choose a range of TV programs e.g. Neighbours, Home and Away and observe the behaviour of the actors in relation to being SunSmart.

- 2 Make comments about the images, messages, behaviours and attitudes in relation to sun safety.

Worksheet 6C: The media (cont.)

3 Write a summary about your observations.

4 a) What influence would your findings have on people watching TV?

b) Write a conclusion about the impact of TV on people's SunSmart behaviour.

How could you help young people be more aware of the influence of the media in shaping their health behaviours?



Fact sheet 7: Sunscreens

What are sunscreens?

Sunscreens are products which protect the skin against the damaging effects of the sun's ultraviolet radiation (UVR).

They contain chemicals which either absorb or reflect the UV rays which would otherwise burn and damage the skin.

Ultraviolet radiation and skin damage

There are three types of UV radiation - UVA, UVB and UVC.

Naturally occurring UVC does not reach the earth's surface as it is absorbed or scattered in the atmosphere.

UVB is primarily responsible for sunburn, suntan and, after many years, premature ageing and skin cancer. UVB also depresses the immune response which is the body's system for fighting infection.

UVA causes skin damage contributing to premature ageing and skin cancer.

What protection do sunscreens give?

SPF 30+ sunscreens filter out about 97% of UVB rays. Sunscreens that are labelled BROAD SPECTRUM also filter out at least 90% of UVA.

Sunscreens are tested on human volunteers. Using a grid pattern, some patches of their skin are covered with sunscreen and some are left uncovered. They are then exposed to an artificial source of UVB in a laboratory. The Sun Protection Factor (SPF) is determined by comparing the time it takes for the patches of skin with sunscreen to show minimal redness with the time it takes to produce the same amount of skin redness without sunscreen.

The SPF on a sunscreen label should only be seen as a guide to the strength of the product. It should not be used to calculate the period of protection offered by the sunscreen.

As many things affect the time it takes for an individual to burn, it is impossible to calculate accurately a 'burn time'. Therefore the SPF rating on a sunscreen label should not be used to determine a 'safe time' before burning will occur.

Damage to the skin begins as soon as the skin is exposed to the sun. Sunburn is the extreme

level of this damage. It is a mistake to believe that damage only occurs if there is sunburn. The effects of the sun on the skin are cumulative so the damage is building up even without burning.

No sunscreen offers complete protection against UV radiation. Even if a sunscreen is reapplied regularly, a small amount of UV still reaches the skin. It is still possible for the skin to be sun damaged, even with sunscreen protection, if exposed to the sun repeatedly for prolonged periods.

What are the regulations regarding sunscreens?

Australia has had a standard for the testing and labelling of sunscreens since 1983 which has been revised regularly since then. Prior to March 1997 the maximum SPF allowed on a sunscreen label in Australia was 15+. Since then the maximum SPF that can be claimed for a sunscreen is 30+.

The current regulations for sunscreens are documented in the Australian/New Zealand Standard, AS/NZS 2604:1998 and apply to sunscreens produced and available in Australia. It specifies how sunscreens should be tested, the standard they must reach and how they should be labelled. The testing is done under strict laboratory conditions. The Australian Standard also refers to the water resistance of a sunscreen which relates to the product's ability to remain on the skin after immersion in water and still test at its SPF number.

'Protection times' shown on labels relate only to this water resistance. They do not relate to the degree of protection against sunburn offered by using the product, ie the SPF number.

In Australia sunscreens have to be listed on the Therapeutic Goods Administration's (TGA) Australian Register of Therapeutic Goods (ARTG). They can only be listed on this register if they comply with the Australian/New Zealand Standard.

What is the correct way to use sunscreens?

Sunscreens should be applied to clean, dry skin twenty minutes before being exposed to the sun. It is not necessary to rub sunscreen creams into the skin until they vanish. The cream will be absorbed into the skin over the twenty minutes prior to exposure to sunlight.

Fact sheet 7: Sunscreens (cont.)

The amount of sunscreen applied should be enough to easily cover the exposed skin, eg one teaspoonful of cream for one arm. If it is difficult to spread the sunscreen over the area it is likely that not enough has been applied.

Sunscreen should be reapplied about every two hours. The reason for this is not because sunscreens lose their effectiveness after two hours, but because they may have been inadvertently removed during normal activity such as nose-blowing, sweating or brushing up against something. It is not uncommon for areas of skin to be missed or inadequately covered during the first application of sunscreens. Reapplication will reduce the risk of inadequate protection.

How effective are roll-ons?

The testing of sunscreens as set out in the Australian Standard does not include testing the method of application. As it is difficult to judge how much sunscreen has been applied when using a roll-on, it is recommended that an ordinary sunscreen cream or lotion be used for the first application and roll-ons used for top-up reapplications.

What are the costs and benefits of using sunscreens?

It has been clearly shown that sunscreens reduce the risk of sunburn. As sunburn is a risk factor for all types of skin cancer, the recommendation to use sunscreens has been based on the assumption that preventing sunburn should reduce the risk of skin cancer.

Sunscreens should not be the only approach to preventing skin damage. They should be used in conjunction with clothing, hats and where possible, avoiding the direct sun in the middle of the day. Sunscreens are not a substitute for these other forms of protection.

Short-term side effects from sunscreens may include skin irritation, and less commonly, skin allergy, blackheads and acne formation and dryness or oiliness of the skin depending on the type of sunscreen used. The likelihood of these reactions occurring depends on the sensitivity of the skin and the number and concentration of the chemicals in the sunscreen.

Although most people focus their concerns on the active suncreening chemicals in a product, there

are other chemicals in the sunscreen base which can cause problems.

In general, the incidence of true allergy to the chemicals in sunscreens is low. The more common side effect is skin irritation.

The long-term side effects of regular sunscreen use are unknown. Sunscreens have not been available for long enough or used by a sufficient number of people for an extended length of time for there to be any guarantees against long-term side effects. However to date there is no evidence to suggest that long-term side effects are likely.

Para amino benzoic acid (PABA), a chemical rarely used in currently available sunscreens, was linked to a higher risk of skin allergy. There was also some concern, in the past, about its carcinogenic effect but this has never been supported in laboratory testing.

Oxybenzone, which is also called Benzophenone-3, is a chemical which absorbs UVA rays. It is sometimes included in sunscreens. It has been used for about thirty years and has never been shown to be toxic to humans or animals.

Current information indicates that there is much more to be gained from using a sunscreen in conjunction with other forms of protection, than avoiding its use and risking sunburn, premature ageing and skin cancer.

How do I choose a good sunscreen?

There are many different brands of broad spectrum sunscreen available. They can be bought as creams, milks, gels and clear lotions.

Different brands use various combinations and proportions of chemicals. For this reason, one brand may suit your skin better than another.

Creams are thicker and tend to be more expensive per gram than lotions. Lotions can be milky or clear. Clear lotions and gels have an alcohol base and are less sticky but more drying than creams and milks which usually contain moisturisers.

Some manufacturers incorporate substances like Titanium Dioxide and/or Zinc Oxide in their sunscreen. These provide a thin film of micro-fine particles which reflect the UV rays. These products may leave a white film or sheen on the skin.

Chain stores and supermarkets often sell their

Fact sheet 7: Sunscreens (cont.)

own brands which are usually cheaper than others. Sunscreens produced by cosmetic companies are generally the most expensive.

What about sunscreens labelled for babies and toddlers?

These sunscreens contain the same suncreening chemicals as 'adult' products. Generally the only difference is that they use a gentler base and do not contain perfumes.

There is no evidence to suggest that the use of sunscreen on small areas of a baby's skin is associated with any long-term side effects. For a small proportion of babies, like adults, some sunscreens can cause minor skin irritation. In such cases it is recommended to try a product which is specially formulated for sensitive skin.

Babies must be protected against sunburn; the damage that begins in childhood can lead to skin cancer later in life.

The best protection for your baby is to avoid direct sunlight especially in the middle of the day during summer. When outdoors, babies and toddlers should be protected by hats, clothing and shade as much as possible. Sunscreen should be applied to those areas that cannot be protected by clothing.

Do sunscreens deteriorate after time?

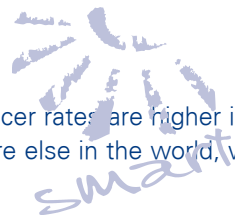
Sunscreens have a shelf life of between two and three years. Sunscreen products have been required to carry an expiry (use-by) date since 1 September 1994.

Sunscreens can deteriorate if they are exposed to heat and/or air for long periods. Store sunscreens in a cool dry place and ensure the cap is replaced tightly after use.

Key points about sunscreens

- No sunscreen offers complete protection against the sun. Hats, clothing and shade should also be used.
- A thick coating of zinc cream does block out the UV totally. It works by reflecting the rays. However as it is thick and completely coats the skin it is only appropriate for small areas such as noses, ears and lips.
- All brands of broad spectrum sunscreen with a SPF 30+ which comply with the Australian/New Zealand Standard AS/NZS 2604 provide effective protection when applied correctly.
- Using a SPF 30+ rather than a SPF 15 sunscreen halves your risk of sunburn for the same length of time in the sun. SPF 30+ however should not be used to increase the amount of time you spend in the sun.
- Sunscreens should be applied to clean, dry skin twenty minutes before exposure to the sun. They should be applied liberally - e.g. about one teaspoonful of cream for one arm.
- Babies under one year old should not be exposed to the direct sun. When taking babies outdoors avoid doing so between 10 am and 3 pm if possible. Natural protection, that is hats, clothing and shade, is best. However small amounts of sunscreen can be applied to areas that cannot be protected by clothing.

Skin cancer rates are higher in Australia than anywhere else in the world, with skin cancers



Fact sheet 8: Hat guidelines for schools

accounting for around 80% of all new cancers diagnosed each year¹.

The major cause of skin cancer is over exposure to the ultraviolet radiation (UVR) from the sun over many years, particularly during childhood and adolescence². Even if exposure does not cause obvious sunburn, damage still occurs and accumulates over the years. It is never too late to start protecting your skin.

Skin protection is important in South Australia particularly from August to May.

Why hats?

Common sites of skin damage and skin cancer are the neck, ears, temples, lips, face and nose. These areas are constantly exposed to the elements and therefore, generally receive more UVR than other body parts.

Wearing a hat is one strategy that is recommended by The Cancer Council South Australia to protect the face, back of the neck and ears.

Hats should always be used in combination with other forms of sun protection practices such as:

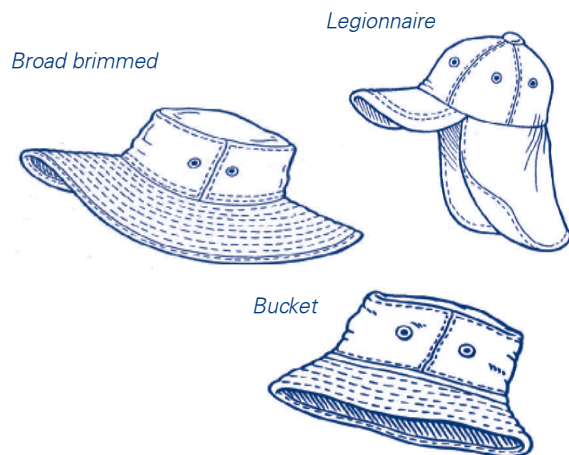
- seeking shade where possible between 10 am and 3 pm, particularly from August to May
- wearing protective clothing - lightweight shirts with collars and long sleeves, long pants or skirts
- applying SPF 30+ broad spectrum, water-resistant sunscreen and reapplying regularly (every two hours).

Which type of hat?

The Cancer Council recommends wearing a hat that provides good shade to the face, back of the neck and ears when outdoors.

Broad brimmed hats should have a brim at least 7.5 cms wide. A broad brimmed hat that provides good shade can considerably reduce the exposure of UVR to the face.

Bucket or surfie style hats should have a deep crown and sit low on the head. The angled brim should be at least 6 cm and provide the face, neck and ears with good protection from the sun.



Legionnaire style hats should have a flap that covers the neck and meets the sides of the front peak to provide protection to the side of the face.

Baseball caps and sun visors are NOT recommended as they leave the ears and back of the neck exposed.

Ventilation should also be a consideration if the hat is to be used during physical activity or warmer weather.

Stylish, fashionable hats that meet The Cancer Council requirements are now widely available.

UVR and temperature

In South Australia, the UVR levels are highest from August to May.

UVR cannot be seen or felt and the intensity of such radiation is not related to air temperature³.

People often get sunburnt on a cooler day because they tend to stay out in the direct sun for longer, rather than seeking shade or covering up as on a hot day⁴.

References

- 1 Australian Institute of Health and Welfare & Australasian Association of Cancer Registries 2000. Cancer in Australia 1998.
- 2 R Marks, D Jolley, S Leats, P Foley. "The role of childhood exposure to sunlight in the development of solar keratoses and non-melanocytic skin cancer." Medical Journal of Australia, 152 (1990), 62-65.
- 3 D Hill, JM Elwood & DR English (Eds.) Cancer Prevention - Cancer Causes. Prevention of Skin Cancer. Kluwer Academic Publishers, 2004.
- 4 R Marks and D Hill. Melanoma Control, Prevention and Early Detection, Australian Cancer Society, 1992.

Fact sheet 9: Sun protection from clothing

Wearing clothing that covers most of the body, a broad brimmed hat, applying a SPF 30+ sunscreen and seeking shade are the best ways to protect your skin against the harsh Australian sun and reduce the risk of skin cancer.

The following information is provided to enable you to make an informed choice when choosing appropriate clothing to protect against the sun's ultraviolet rays.

The design of the garment is the most important factor. It should cover as much of the skin as possible. Shirts/blouses with collars and long sleeves and long trousers/skirts offer the best protection. However in some circumstances, elbow-length sleeves and knee-length shorts may be more appropriate and offer an acceptable compromise.

Testing of different fabrics by the Australian Radiation Laboratory in 1992 showed that approximately two thirds of cotton and cotton-polyester fabrics offered 95% protection against ultraviolet radiation. The tests showed that the tightness of the weave of the fabric was the factor which most affected the amount of ultraviolet radiation transmitted. Colour was also a factor with dark colours giving more protection than light colours.

In 1996 an Australian Standard (AS/NZ 4399:1996 Sun protective clothing - evaluation and classification) was published to provide information to consumers on the relative capability of fabrics and clothing to protect the skin against solar ultraviolet radiation.

This information is provided in the form of a labelling system which uses the term Ultraviolet Protection Factor (UPF) to rate the sun protectiveness of fabrics and clothing. The Standard regulates the sun protective claims that manufacturers can make about their products.

The UPF rating is based on a test that measures the amount of ultraviolet radiation that passes through fabrics or clothing. Unlike the test

method used to rate sunscreens that uses volunteers and measures the amount of transmission of ultraviolet radiation by human skin reactions, the testing of fabrics and clothing is done using machines.

The test method of this Standard relates to unstretched, dry fabrics and clothing. The UPF rating of a garment could be lower when it is stretched or wet.

The UPF rating only relates to the fabric that garments are made of. The rating does not cover the design of the garment which can affect its sun protectiveness. Fabrics and clothing will only provide protection to the skin areas they cover.

When choosing a garment for sun protection, the important considerations are:

- the design (in terms of the amount of skin coverage)
- the closeness of the weave
- comfort (while dark colours offer more protection, they also absorb heat and tend to be less comfortable to wear in hot weather).

Fabrics and clothing which do not carry a UPF rating do not necessarily offer less protection than those that have been tested. Buying fabric or clothing which has been rated does take the "guess work" out of assessing the sun protectiveness offered by the weave. However you will still need to consider the design and comfort factors.

UPF classification system

UVR protection	% UVR transmission	UPF ratings
Good	6.7 – 4.2	15, 20
Very good	4.1 – 2.6	25, 30, 35
Excellent	<2.5	40, 45, 50, 50+

Fact sheet 6: Suntanning and sunburn

Tanning

A tan is much more than the skin just turning brown. Skin cells located in the epidermis produce a pigment called melanin that gives skin its natural colour. When skin is exposed to UV radiation, melanin production is stimulated, causing the skin to darken.

Many people refer to a healthy tan – but even a light tan is a sign the skin has been exposed to too much sun. Tanning without burning may still cause DNA and skin damage leading to premature ageing, and potentially skin cancer.

Fair skinned people (a large proportion of the Australian population) have a less protective form of melanin than people with darker skins. When fair-skinned people spend time in the sun, cells called melanocytes produce melanin, which then stays in the top layer of skin for four or five days, sometimes giving a tanned appearance. The melanin produced by fair-skinned people is much less protective, meaning no amount of sunbaking will result in a lasting tan – just sunburn and skin damage.

Sunburn

In Australia, sunburn can occur in as little as fifteen minutes on a fine January day (Cancer Foundation of Western Australia 1994).

It is the UV radiation in the sun that causes our skin to burn. UV radiation is invisible; it is not warm and can pass through light cloud, so sunburn can occur on cool, cloudy days.

As soon as UV radiation hits our skin, the epidermis releases chemicals that cause the blood vessels to swell and leak fluids, causing inflammation, pain and redness – otherwise known as sunburn. This type of damage will continue to develop for twenty-four to seventy-two hours after exposure to the sun.

