

# Activity 24: Introductory activities – raising awareness of the importance of health promotion in your school

## Aims

- To increase awareness of the importance of school policy and education in helping students to change their skin protection behaviours and attitudes.
- To understand the importance of early detection of skin cancers.
- To understand current South Australian trends in relation to adolescent tanning and skin protection behaviour and attitudes.
- To gain an understanding of student and staff SunSmart behaviour and attitudes in your school.

**Assessment outcomes** English 4.3; H&PE 4.6, 4.7; Maths 4.1

**Reference fact sheet** Fact sheet 1: Skin cancer

**Worksheet** Worksheet 24: A snapshot survey of SunSmart behaviours in your school

## Requirements

- As a preliminary exercise, complete “Lauren’s Story” and “Adolescent tanning and sun-protection trends” activities (see below) to enable students to understand the importance of promoting sun safety in the school.
- Complete Worksheet 24: A snapshot survey of SunSmart behaviours in your school.

## Teacher guidelines

- 1 Read the following true story to the class to help students understand the importance of school policy and education that relates to skin cancer prevention and early detection.

### Lauren’s story

On the 27th of July 2003, when I was 12 years of age, I was diagnosed with an early melanoma on my lower left leg.

I had visited my local doctor after noticing changes in my mole, but he assured me it was fine. After watching a video on skin cancer at school, I checked my mole and was again worried because on the video it said that melanomas are very common in the lower leg of women. I went to the doctor and although he told me it was nothing to worry about as it looked like a small keratosis, he referred me to see a specialist. The specialist also said it was nothing to worry about, but because I was concerned and considering my Grandpa has had many skin cancers, it was appropriate that I have it removed.

About a week later I received a phone call to tell me that I did actually have an early melanoma. It didn’t really sink in to me how life threatening it really was, so initially I didn’t think about it very much. When I went back to the specialist, he removed more of the skin from around my wound, but this time wider and deeper. A biopsy was then taken on the skin and fortunately no more melanoma was identified.

I realize now that I was very lucky to have found my melanoma. The doctor said that if I had waited until next September, I probably would have died, because the cancer would have spread throughout my body. Now I take very good care of my skin.

In a way, having a melanoma was good and bad for me. It was bad because now I have to be very careful and I stress a lot more about sun damage than I used to, but it was also good because it has taught me a lot about my skin. I know that I have to try to avoid the sun between 10 am–3 pm, and I know that I should cover up as much as possible and use sunscreen whenever I do get sun exposure.

## Activity 24: Introductory activities – raising awareness of the importance of health promotion in your school (cont.)

It has taught me that it is not impossible for someone my age to be diagnosed with melanoma.

I never thought that I would get skin cancer. I always used to see the ads on TV telling people how important it is to protect your skin and prevent skin cancer, but I never really took that much notice. Now when ads like that come on TV, I am very aware because I can really relate to it. When I tell people that I have had a melanoma they are always shocked that I could have had a skin cancer, because I am just like them, and it is rare when you are young, especially at the age of twelve.

Having skin cancer was a real life learning experience for me. I think that it is very important to make sure that students realize how important it is to take care of their skin, because if I hadn't seen that video at school I know that I wouldn't have been so aware of my own skin changes and that melanoma really could happen to anybody at any age.

Lauren – age 15

Adelaide school student

After reading Lauren's story – discuss the following questions with the class

- What makes Lauren's story so interesting?
- What helped Lauren recognize that she may have skin cancer?
- What steps did she take before her surgery?
- What has Lauren learnt about sun protection?
- How important is early detection? i.e. checking skin for changes?
- How can a school help students understand and practise SunSmart behaviour?
- Think of ways students could promote SunSmart behaviour in the school.

### 2 Adolescent tanning and sun-protection trends

Using Tables 1 and 2 below, discuss the trends and work through the discussion questions with the students to help them understand current adolescent tanning and sun-protection attitudes and behaviours.

#### **Sun protection data from Australian School Students Alcohol and Drug (ASSAD) surveys 1993 – 2005. South Australian Students aged 12–17**

Table 1: Preference for a suntan

	1993	1996	1999	2002	2005
Like to get a tan – Answer: no	19%	25%	28%	29%	31%
Type of tan preferred: Light	35%	36%	38%	35%	35%
Moderate	35%	29%	27%	27%	26%
Dark	9%	8%	6%	7%	6%
Very dark	3%	2%	2%	2%	2%



## Activity 24: Introductory activities – raising awareness of the importance of health promotion in your school (cont.)

Table 2: Percentage taking a variety of sun protection measures

Usually or always	1993	1996	1999	2002	2005
Wear a hat when outside between 11am and 3 pm during summer	46%	48%	47%	45%	40%
Wear sunscreen (SPF15+) when outside between 11 am and 3 pm during summer	69%	63%	65%	53%	49%
Wear cover up clothing when outside between 11 am and 3 pm during summer	25%	26%	22%	21%	22%
Stay in the shade when outside between 11 am and 3 pm during summer	31%	33%	31%	28%	27%

### Discussion questions:

- 1 What do the results indicate about preference for a tan in the last 12 years?
  - 2 What do these statistics tell us in relation to students' sun protection behaviours?
  - 3 Can you suggest reasons for these changes in behaviour?
  - 4 How can risks be reduced?
  - 5 What strategies could be implemented in the school to improve these statistics in the future?
  - 6 Conduct your own class survey using the questions listed in the tables.
- 3 Complete Worksheet 24: A snapshot of SunSmart behaviours in your school so that students see a snapshot of what is happening at their school in relation to SunSmart behaviours.

If time is limited, teachers may prefer to allocate one SunSmart behaviour to each group to observe, and then collate class results.

# Worksheet 24: A snapshot survey of SunSmart behaviours in your school

Choose a particular target area e.g. school year level, school staff, oval area, courtyard area etc. Work in small groups and note the number of those who are practising SunSmart behaviour compared to those who are not. Your teacher will allocate the SunSmart behaviours that your group is to observe.

SunSmart behaviour includes:

- wearing an appropriate hat i.e. broad brimmed or bucket hat
- wearing appropriate clothing that covers the skin
- wearing SPF 30+ broad spectrum sunscreen
- seeking shade
- wearing wrap around style sunglasses.



Fill in the following table using the criteria listed. You will need to do some calculations to determine what proportion (percentage) of students are/are not being SunSmart.

Specific SunSmart behaviour observed	Approximate numbers	Approximate total number being observed	%
Wearing hats			
Using shade			
Wearing sun protective clothing i.e. long sleeves			
Wearing sunglasses			
Using sunscreen – if possible ask those you are observing if they are wearing sunscreen			
<b>General observations</b>			
Number displaying good SunSmart behaviour			
Number displaying no SunSmart behaviour			

Answer the following questions relating to your findings:

- 1 What percentage of students
  - a) wear hats \_\_\_\_\_
  - b) use shade \_\_\_\_\_
  - c) wear protective clothing \_\_\_\_\_
  - d) wear sunglasses \_\_\_\_\_
  - e) use sunscreen \_\_\_\_\_



- 2 Which type of SunSmart behaviour seems to be most popular with students?  
\_\_\_\_\_

- 3 What percentage of students are not displaying any SunSmart behaviour?  
\_\_\_\_\_

- 4 Based on your results, what sun protection strategies need to be implemented?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 5 Use these results to prepare a written or oral presentation for an appropriate audience e.g. a report for the school newsletter.

# Fact sheet 1: Skin cancer

## Structure and function of the skin

The skin is the largest organ of the body. It has several important functions. It acts as a protective layer against injury and disease and also regulates our body temperature and maintains its hydration.

The skin consists of three layers:

- the epidermis, or the outer layer
- the dermis, or the inner layer
- the subcutaneous fat layer.

The epidermis is made up of cells that produce keratin, a substance that covers the outside of the skin and resists heat, cold and the effects of many chemicals. The cells in the epidermis also produce melanin, the substance that gives our skin its colour. Melanin is able to absorb ultraviolet light and provide some protection from its damaging effects.

## What is cancer?

Cancer is a disease of the body's cells. Normally the body's cells grow and divide in an orderly manner so that growth and healing of injured tissue occurs.

Occasionally some cells behave in an abnormal way and may grow into a lump which is called a tumour.

Tumours can be non-cancerous [benign] or cancerous [malignant]. Benign tumours do not spread to other parts of the body.

A malignant tumour is made up of cancer cells. These cells have the ability to spread beyond the original site and if left untreated may invade and destroy surrounding tissues. Sometimes cells break away from the original [primary] cancer and spread to other organs. When these cells reach a new site they may form another tumour often referred to as a secondary cancer or metastasis.

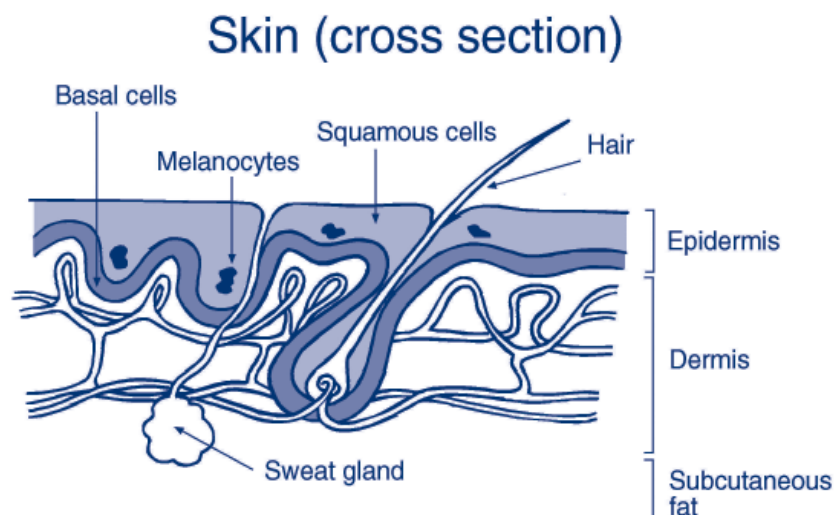
## What is skin cancer?

Skin cancer is a type of cancer that begins in the basal layer of the epidermis. There are three main types of skin cancer: basal cell carcinoma, squamous cell carcinoma and melanoma. Melanomas start in the pigment cells [melanocytes] while basal and squamous cell carcinomas develop from the epidermal cells. [Carcinoma is a term used for some types of cancer].

### Basal cell carcinoma [BCC]

Basal cell carcinomas are the most common but least dangerous type of skin cancer. They grow slowly over months to years but if left untreated a deep [rodent] ulcer may form. Fortunately they very rarely spread to other parts of the body. If you have one basal cell carcinoma you may have others, either at the same time or in later years.

Basal cell carcinomas are most commonly found on the face, neck and upper trunk. They appear as a lump or scaly area and are pale, pearly or red in colour. They may have blood vessels on the surface.



# Fact sheet 1: Skin cancer (cont.)

## Squamous cell carcinoma [SCC]

Squamous cell carcinomas are less common but more dangerous than basal cell carcinomas. They usually grow over a period of weeks to months. These cancers may spread to other parts of the body [metastasise] if not treated promptly.

Squamous cell carcinomas appear on areas of the skin most often exposed to the sun. They have scaling, red areas which may bleed easily and ulcerate, looking like an unhealed sore.

These common skin cancers generally occur in people over the age of 40. However basal cell carcinoma can occur in younger adults. The major cause of these skin cancers is sun exposure over many years.

## Melanoma

Melanoma is the rarest but most dangerous skin cancer. If left untreated melanoma can spread to distant parts of the body to form secondary cancers or metastases.

Melanomas can appear anywhere on the body not only in areas that get a lot of sun. The first sign of a melanoma is usually a change in a freckle or mole, or the appearance of a new spot on normal skin. Changes are normally seen over a period of several weeks to months, not over several days. The changes are in size, shape or colour.

Melanoma can occur from adolescence onwards and is the most common cancer in the 15–44 year age group. In rare instances it may develop in children.

## How common is skin cancer?

Skin cancer rates are higher in Australia than anywhere else in the world. It is the most common form of cancer in Australia affecting all age groups from adolescents upwards. Most common is basal cell carcinoma which accounts for about 75% of all skin cancers. Squamous cell carcinoma accounts for 20% and melanoma less than 5%.

One out of two Australians will develop a skin cancer in their lifetime – usually a basal cell carcinoma. In South Australia in 2003 the lifetime risk for developing melanoma was 1 in 31 for men and 1 in 39 for women.

## Signs and symptoms

As skin cancers are visible, they can be seen and checked as soon as they develop. Early symptoms of skin cancer may seem quite minor but any suspicious spot should be seen by a doctor immediately.

The signs to look for are:

- A crusty, non-healing sore.
- A small lump which is red, pale or pearly in colour.
- A new spot, freckle or mole changing in colour, thickness or shape over a period of several weeks to months. Particular attention should be paid to spots that are dark brown to black, red or blue-black.

## Diagnosis

If a doctor suspects a skin cancer, a biopsy may be performed. A biopsy is the removal of all or part of the affected skin, generally under local anaesthetic. It is a simple procedure that can be done by your family doctor or you can be referred to a specialist. The piece of skin that has been removed is then examined under a microscope. However in many cases the whole tumour is removed and a specimen is then sent to the laboratory for diagnosis.

## Treatment

### Common skin cancers



A variety of methods are available to treat the common skin cancers. Your doctor will choose your treatment by taking into consideration a number of factors. These will include the type of skin cancer, its size and position on your body and your personal preference.

Surgery can be used to remove the skin cancer and a small area of normal skin. This is quite simple and can usually be done under local anaesthetic.

Sunspots or pre-cancers can be briefly frozen with liquid nitrogen. This is called cryotherapy. Following cryotherapy the skin can become intensely red and peel away. Healing will begin in about a week.

Another technique is simply scraping off small common cancers [curettage] and burning the spot [cautery or diathermy].

# Fact sheet 1: Skin cancer (cont.)

Radiation therapy is another option although less commonly used now. It causes a crusting sore which takes some weeks to heal and then leaves a scar.

## Melanoma

Surgery is the preferred method of treatment for melanoma. Very thin melanomas are usually removed along with a small area of normal skin, under local anaesthetic.

For deeper melanomas a wide area of skin may need to be removed to make sure that all the cancer cells have been taken out. The local lymph glands may also be removed at this time.

## Outlook

Virtually all basal and squamous cell carcinomas that are found and treated early are cured.

The majority of people with early melanoma which is appropriately treated do not have any further trouble with their disease. However because there is a chance that the melanoma will reappear, your doctor will examine you at regular intervals.

For further details on outlook you should speak to your own doctor who is familiar with your full medical history.

## Causes of skin cancer

The major cause of skin cancer is exposure to the ultraviolet rays of the sun over many years.

### Sunlight exposure

Childhood exposure to the sun is an important factor in the development of skin cancer later in life. Research also suggests there may be a link between sunburn during childhood and melanoma in adulthood.

### Occupation

People who work outdoors have a greater risk of developing the common skin cancers than indoor workers. This is because of their greater exposure to sunlight. Workers in some industries have to take precautions against other known causes of common skin cancers, such as arsenic, polycyclic hydrocarbons and a number of other chemical compounds.

## Who is at risk?

Everyone is at risk of skin cancer, although people with skin that burns easily and rarely tans are at the greatest risk. Those who burn in early summer and then tan are also at high risk if they do not protect their skin. Unprotected skin, whether tanned or not, is likely to be damaged by the sun and may develop skin cancer later in life.

### Skin type

Skin cancer is seen most often in fair skinned people who have lived in Australia all their lives. It is most common in people of Celtic [Scottish, Irish and Welsh] background. However it also occurs in people whose parents migrated from Southern Europe e.g. Greece or Italy and who have themselves spent all or most of their lives in Australia. This is because the Australian sunlight is very harsh.

### Existing skin damage

Solar keratoses [sunspots] are dry, rough spots on the skin that are common in people over 40. They are not skin cancers but an indication that the skin has had enough sun exposure to develop skin cancer. People with keratoses should take particular care to protect their skin from the sun. Keratoses may progress and develop into SCCs.

They should also be examined to make sure a skin cancer is not present.

## How can you reduce your risk?

- Minimise your time in the sun between 10.00 am – 3.00 pm.
- Use shade as much as possible when outdoors.
- Wear protective clothing - a wide brimmed hat and cover-up clothing.
- Apply SPF 30+ broad spectrum sunscreen to skin which isn't covered by clothing.

