

# Improving health together



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Public Health Factsheet

**W**elcome to this edition of Improving Health Together, which focuses on skin awareness, sun safety and skin cancer.

Exposure to ultraviolet radiation (UVR) is the leading cause of skin cancer. This can occur naturally via sunlight and artificially through the use of sun lamps and tanning beds. The risk of skin cancer can be reduced, for example, by opting to stay in the shade, wearing protective clothing, avoiding the sun during the middle of the day and using high sun protection factor products.

The National Institute for Health and Clinical Excellence (NICE) will be producing guidance on Information, Resources and Environmental Changes to Prevent Skin Cancer. This guidance is due to be published in January 2011.

## Skin Awareness, Sun Safety and Skin Cancer

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SunSmart

**WARNING:**  
Sunburn can  
double your  
risk of skin  
cancer



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### Facts

- ◆ Skin cancer is the most common type of cancer in the UK.
- ◆ Skin cancer is one of the most preventable forms of cancer.
- ◆ In 2005, skin cancer in England was estimated to cost over £190 million. The NHS alone spent approximately £70 million on the condition (Morris et al. 2005<sup>1</sup>).
- ◆ There are two types of skin cancers; Malignant Melanoma and Non-Melanoma.
- ◆ Non-Melanoma cancers are: Basal cell carcinoma (**BCC**) sometimes known as rodent ulcer, and Squamous cell carcinoma (**SCC**).
- ◆ Ultraviolet radiation (**UVR**) exposure represents one of the most avoidable causes of cancer risk and mortality in humans.
- ◆ Sunburn or intense sun exposure in childhood increases the risk of developing skin cancers in later life. (MacKie, R.M. 2006<sup>2</sup>.)
- ◆ If there is a family history of skin cancer there is an increased risk of getting skin cancer.
- ◆ If a patient has lots of moles (more than 50) it is advised that they take special care of their skin, check monthly for changes and protect skin from sun damage by using clothes, shade and sunscreen.

## Skin and Skin Types

Human skin is composed of an outer layer, the epidermis, and an underlying layer of fibrous tissue called the dermis. Beneath the dermis is the subcutaneous fat.

Dermatologists use a scale of I to VI to describe skin type with regard to the effects of ultraviolet radiation (UVR). An individual's skin type cannot be changed and does not vary according to how tanned the person is—it is genetically determined. This system allows for a common sense approach to self protection.

<b>Skin Type I</b>	♦ Pale skin, burns very easily and rarely tans. Generally have light coloured or red hair and freckles. Sunburn on unprotected skin can be as short as 10 minutes.
<b>Skin Type II</b>	♦ Usually burns but may gradually tan. They are likely to have light hair, and blue or brown eyes. Some may have dark hair.
<b>Skin Type III</b>	♦ Burn with long exposure to the sun but generally tan quite easily. They usually have a light olive skin with dark hair and brown or green eyes.
<b>Skin Type IV</b>	♦ Burn with very lengthy exposures but always tans easily as well. They usually have brown eyes and dark hair.
<b>Skin Type V</b>	♦ Have naturally brown skin, with brown eyes and dark hair. They burn only with excessive exposure to the sun and their skin further darkens easily.
<b>Skin Type VI</b>	♦ Have black skin with dark brown eyes and black hair. Burn only with extreme exposure to the sun.

## Skin Cancer

Incidence rates of Skin Cancer in England have increased by approximately 30% over the last five years and sun and sunbed exposure are the main preventable causes of skin cancer. Simple changes, such as avoiding the sun when it is at its strongest, good use of sunscreens, wearing hats and covering with clothes could lead to approximately 90% of cases being prevented.

The World Health Organisation estimated that in the year 2000, up to 71,000 deaths worldwide were attributable to excessive UVR exposure (WHO 2006<sup>3</sup>). In the UK more than 70,000 new cases of skin cancer are diagnosed annually making it the most common cancer. Of these, 9,000 are melanoma. 2,300 deaths occur from skin cancer in the UK of which 1,800 are melanoma and 500 from non melanoma skin cancer.

There are two main types of skin cancer, non-melanoma and malignant melanoma:

- 1 Non-melanoma skin cancer (NMSC) is the most common and is usually the easiest to treat. There are two main sorts: Basal cell carcinoma and the more serious Squamous cell carcinoma (if left untreated, Squamous cell carcinoma can spread to other parts of the body and can be severely disfiguring). Over 80% of NMSCs occur on areas of the body that are frequently exposed to sunlight, and tumours may be multiple.
- 2 Malignant melanoma is the most serious type and causes the majority of skin cancer deaths. Melanoma is being diagnosed with increasing frequency in younger as well as older adults.

## Factors increasing the risk of developing and dying of skin cancer

<b>Age and Sex</b>	The number of cases of malignant melanoma increases with age and is more common in women (Cancer Research UK, 2006 <sup>4</sup> ).
<b>Individual Risk</b>	Skin type, number of moles, hair and eye colour, a history of lowered immunity or transplant and a family or personal history of skin cancer all affect the risk of melanoma (Cancer Research UK, 2006 <sup>4</sup> ).
<b>Skin Damage</b>	Sunburn that occurs at any age is associated with an increased risk of developing skin cancer later in life (Elwood and Jopson, 1997 <sup>5</sup> ).

A patients' risk of developing future skin cancers significantly increases following a diagnosis of skin cancer.

# Awareness and Protection

## How to enjoy the sun safely

- ◆ Spend time in the shade between 11 am and 3 pm.
- ◆ Make sure you never burn.
- ◆ Protect the skin with clothing, including a broad-brimmed hat, long sleeved top, trousers, and UVR protective sunglasses. Choose close weave fabrics that don't allow the sun through.
- ◆ Remember to take extra care with children.
- ◆ Then use factor 30+ sunscreens. SPF 30 (Sun Protection Factor) which also has high UVA protection (SPF 50 for children or people with pale skin).

### REMEMBER

- ◆ Keep babies and young children out of direct sunlight.
- ◆ If working outdoors, protect exposed skin during the summer with regular applications of high factor sunscreen, wear a hat and shade face and ears. Encourage people to try to work in the shade between 11 am and 3 pm.
- ◆ **No sun tan is healthy.**

## UV Index

When you know your skin type you can work out your burn risk and when to protect yourself. Check the UV Index for the day on the [Met Office website](#), then see how risky this is for you on the burn risk table

		Skin Type			
		I and II	III and IV	V	VI
UV Index	1-2	low	low	low	low
	3-4	medium	low	low	low
	5	high	medium	low	low
	6	high	medium	medium	low
	7-8	very high	high	medium	medium
	9-10	very high	high	high	medium

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- ◆ Low risk - no protection is needed.
- ◆ Medium risk - take care around midday and do not spend too long in the sun unprotected.
- ◆ High risk - cover up and spend time in the shade between 11 am and 3 pm. Use at least factor 30 sunscreen on exposed skin.
- ◆ Very high risk - be sure to cover up and in the shade between 11 am and 3 pm, and use at least factor 30 sunscreen.

## Mole Checking

The British Association of Dermatologists has produced a guide for mole checking—**ABCD Easy Rules**

<b>A</b> symmetry	The two halves of the area may differ in shape.
<b>B</b> order	The edges of the area maybe irregular or blurred and sometimes show notches.
<b>C</b> olour	This may be uneven. Different shades of black, brown and pink may be seen.
<b>D</b> iameter	Most melanomas are at least 6 mm in diameter. Report any changes in size, shape or diameter to your doctor.
<b>E</b> xpert	If in doubt, check it out. If concerned make sure you are referred to see a consultant Dermatologist.

Patients on immunosuppressive drugs, which affect the immune system, are also at increased risk of skin cancers, specifically SCCs. These patients should examine their skin regularly and get checks from their doctor. They should protect themselves from the sun using SPF 30+, clothing and shade.

## Sun Screens

Generally it has been advised that people should select sunscreens with SPF 30 or above—the higher the better. This is because people generally do not apply sufficient quantities of the product<sup>6</sup>. Use a sunscreen that is 'broad spectrum', meaning that it offers protection against UVA and UVB.

No sunscreen no matter how high the factor can offer 100% protection. Therefore, sunscreen should not be used as an alternative to clothing and shade.

Advice should be given that sunscreen is applied to all exposed areas especially those that are regularly missed such as the back, sides of the neck, temples and ears. Check the expiry date—most sunscreens have a shelf life of 2-3 years.

The overall message in terms of sunscreen use is "more is better". Apply 15 to 30 minutes before going out in the sun to allow to dry, make sure a

sufficient layer is applied, reapply at least every 2 to 3 hours and straight after swimming, perspiring or towel drying.

For more information see The British Association of Dermatologists [Sunscreen and sun safety factsheet](#).

## Sunbeds

Sunbeds are not the safe alternative to sun tanning. Sunbeds give out UV rays like the sun and it is this that damages the DNA in skin cells, which causes cancer. Possible effects of sunbed use can include premature skin ageing, increased skin fragility, cataracts and skin cancer. (Hawk, J.L.M. 2000<sup>7</sup> and Swerdlow, A.J. 2000<sup>8</sup>)

## Policy Context

### Improving outcomes for people with skin tumours including melanoma.

NICE Cancer Services Guidance (2006)  
<http://guidance.nice.org.uk/CSGSTIM>

### Referral guidelines for suspected cancer.

NICE clinical guideline 27 (2005)  
[www.nice.org.uk/guidance/CG27](http://www.nice.org.uk/guidance/CG27)

### The NHS Cancer Plan: A plan for investment, a plan for reform

Department of Health (2000)  
[www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4009609](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4009609)

## References

- 1 Morris S, Cox B, Bosanquet N. Cost of skin cancer in England. London: Tanaka Business School 2005.
- 2 MacKie R.M. Long-term health risk to the skin of ultraviolet radiation. *Prog. Biophys Mo21 Bio/2006* 92: 92-96.
- 3 WHO. *Global disease burden from solar ultraviolet radiation 2006*. <http://www.who.int/mediacentre/factsheet/fs305/en/index.html>
- 4 Cancer Research UK. *CancerStats malignant melanoma—UK*. London: Cancer Research UK 2006.
- 5 Elwood J, Jopson J. *Melanoma and sun exposure: an overview of published studies*. *International Journal of Cancer* 1997 73: 198-203.
- 6 Palm MD and O'Donoghue MN. *Update on photoprotection*. *Dermatologic Therapy* 2007 20: 360-376.
- 7 Hawk, J.L.M. *Sunbeds*. *Radiat Prot Dosimetry* 2000 91: 143-5.
- 8 Swerdlow, A.J. *Epidemiology of chronic disease risk in relation to ultraviolet radiation exposure*. *Radiat Prot Dosimetry* 2000 91: 19-23.

## Order your free resources

These are the resources recommended by your Public Health team for use with the Skin Awareness, Sun Safety & Skin Cancer campaign.

### British Association of Dermatologists

[www.bad.org.uk/](http://www.bad.org.uk/)

Telephone: 0207 383 0266

Sun Awareness Campaign Pack available free of charge containing 200 leaflets (50 x 4 different leaflets) and 8 posters (2 x 4 posters).



### Cancer Research UK

Telephone 0207 061 8333

Sunsmart Resources

[www.sunsmart.org.uk/sunsmart-resources/index.htm](http://www.sunsmart.org.uk/sunsmart-resources/index.htm)

Postcards, leaflets, posters – “Sunburn fades – sun damage lasts”, “Kids cook quick”, “Sunbeds”, “Detecting Skin Cancer”, “Warning! Sunsmart information”.



## Websites

### British Association of Dermatologists

[www.bad.org.uk](http://www.bad.org.uk)

Professional organisation for dermatologists in the UK and Eire. Website gives the public reliable information about skin and skin diseases, including sun awareness and how to check for the first signs of skin cancer.



### Cancer Research UK—SunSmart

[www.sunsmart.org.uk](http://www.sunsmart.org.uk)

Cancer Research UK website

covering skin cancer with information on staying safe in the sun, sunbeds, and the SunSmart campaign.



### NHS Choices

[www.nhs.uk/](http://www.nhs.uk/)



A guide to looking after your skin including sun protection and mole self assessment test.

### NHS Evidence—Skin Disorders

[www.library.nhs.uk/skin/](http://www.library.nhs.uk/skin/)



“One stop” resource bringing together high quality evidence based information, including May 2010 Skin Cancer Annual Evidence update.

### Skin Cancer Hub

[www.swpho.nhs.uk/](http://www.swpho.nhs.uk/)

Website managed by South West PHO. Aims to equip Health Professionals and others with information to promote skin cancer prevention and early diagnosis.



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