



Sun Safety

in construction



SHB

Scottish House Builders
Health & Safety Forum

: 07.08.13



The University of
Nottingham

UNITED KINGDOM • CHINA • MALAYSIA



U.V. Exposure & Skin Cancer

... an overview

Skin cancer is of three main types:

2 of these are Non-melanoma Skin Cancer (NMSC)

Basal Cell Carcinoma (BCC)

Commonest form accounting for 74% of all NMSC cases



Squamous Cell Carcinoma (SCC)

A rarer form (23% of all NMSC cases)

But a far more rapidly growing tumour



The University of
Nottingham



U.V. Exposure & Skin Cancer

... an overview

& finally the most serious form of skin cancer:

Malignant Melanoma



The least common form of skin cancer but much more aggressive.

Associated with abnormalities in moles on the skin, this type of cancer commonly spreads to other parts of the body causing secondary cancers.



The University of
Nottingham



Skin cancer statistics table



Skin cancer – UK	Males	Females	Persons
Number of new cases of non-melanoma skin cancer (UK 2010)	55,747	43,801	99,549
Incidence rate per 100,000 population*	139.4	93.2	113.3
Number of deaths from non-melanoma skin cancer (UK 2010)	322	224	546
Mortality rate per 100,000 population*	0.7	0.3	0.5

Estimated at actually well over 100,000 cases annually this makes Non Melanoma Skin Cancer (NMSC) the most common type of cancer



The University of
Nottingham



Skin cancer statistics table



Skin cancer – UK	Males	Females	Persons
Number of new cases of <u>malignant melanoma</u> (UK 2010)	6,201	6,617	12,818
Incidence rate per 100,000 population*	17.2	17.3	17.1
Number of deaths from malignant melanoma (UK 2010)	1,266	937	2,203
<i>Note: over 4 x that from NMSC, which has approx 9 x as many cases annually</i>			
Mortality rate per 100,000 population*	3.3	2.0	2.6
Five-year survival rate (adult patients diagnosed 2005-2009,)	84%	92%	-%



The University of
Nottingham



U.V. Exposure & Skin Cancer

... why this topic ?

Skin cancer is the most common cancer, worldwide, with Non-Melanoma Skin Cancer (NMSC) accounting for around 30% of all newly diagnosed cancers and placing a substantial burden on health services
(McCool, Reeder, Robinson, Petrie & Gorman - 2009)

A study based on data (from 2002) estimated that the cost of skin cancer borne by the NHS was **£101.6 million** (which is only 42% of the overall cost to the UK economy)
(Morris, Cox & Bosanquet – 2009)



The University of
Nottingham



Sun Exposure & Skin Cancer

Construction workers'
and
their awareness of the risks of skin cancer
from working in the sun.



The University of
Nottingham



U.V. Exposure & Skin Cancer

... why this topic ?

Occupational

NMSC accounted for 21% of all occupational health registrations - data: 2004

Solar Radiation (NMSC) registrations (EPIDERM)
: 1,541 of which 841 (56%) were construction

HSE: The burden of occupational cancer in Great Britain - 2010



The University of
Nottingham



U.V. Exposure & Skin Cancer

.... greatly increased risk

Researchers from the University of Manchester found from reviewing cases reported in The Health & Occupation Reporting (THOR) network that some construction workers were up to nine times more likely to get skin cancer than other workers from a similar social group and background.

They have a higher risk due to long periods working outside in direct sunlight and ultraviolet rays reflected from nearby surfaces such as concrete.

(Stocks, Turner, McNamee, Carder, Hussey & Agius – 2011)



The University of
Nottingham



Previous Research Project ... *use of the findings*

Some of the findings have been published in
Occupational Medicine ...

Occup Med (Lond)-2011-Madgwick-430-3[1].pdf - Adobe Reader

File Edit View Document Tools Window Help

1 / 4 139% Find

Occupational Medicine 2011;61:430-433
Advance Access publication on 13 July 2011 doi:10.1093/occmed/kqr054

SHORT REPORT

Sun safety measures among construction workers in Britain

P. Madgwick¹, J. Houdmont² and R. Randall³

¹Directorate of Estates Management, Sheffield Teaching Hospitals NHS Foundation Trust, North House, Northern General Hospital, Herries Road, Sheffield S5 7AU, UK, ²Institute of Work, Health & Organisations, University of Nottingham, International House, Jubilee Campus, Wollaton Road, Nottingham NG8 1BB, UK, ³School of Psychology, University of Leicester, 106 New Walk, Leicester LE1 7EA, UK.

Correspondence to: J. Houdmont, Institute of Work, Health & Organisations, University of Nottingham, International House, Jubilee Campus, Wollaton Road, Nottingham NG8 1BB, UK. Tel: +44 (0)115 84 66647; fax: +44 (0)115 84 66625; e-mail: jonathan.houdmont@nottingham.ac.uk

Background Relative to other occupational groups in Britain, construction workers have a high incidence of skin cancer attributable to sun exposure. The importance of sun safety measures to minimize the risk of skin cancer is recognized in the literature; however, little is known about the factors associated with their use by construction workers. Knowledge in this area could help inform interventions to encourage sun safety behaviour within the sector.

Downloaded from

19:18 01/11/2011



U.V. Exposure & Skin Cancer

Current Project:

The development and evaluation of a sun safe intervention for construction workers

Sun Safety
in construction



The University of
Nottingham

Questionnaire: Baseline



CONFIDENTIAL – only the researcher will see this so please be honest with the answers you give.

About You

Your gender Male ☐ Female ☐ Your age

Where you live in the U.K South-East ☐ London ☐ South-West ☐ East Anglia ☐

Midlands ☐ North ☐ North-East ☐ North-West ☐ Scotland ☐ Wales ☐ N. Ireland ☐

Choose the option below which is most like your skin, hair & eye colour
(your skin type has a direct effect on your potential risk of skin cancer)

I have:
(choose and tick the one closest to you)

Very pale coloured skin, a lot of freckles, light blonde, red or ginger hair, light blue, grey or green eyes

Fair/pale coloured skin, fair/ brown or blonde coloured hair, blue, grey or green eyes

Fair to beige coloured skin, usually dark hair, hazel or light brown eyes

Olive to light brown coloured skin, dark brown or black hair, dark brown eyes

Dark brown coloured skin, dark brown or black hair, dark brown eyes

Black coloured skin, black hair, brownish/black eyes

About the Sun

Have you ever had your skin checked by a health professional? Yes ☐ No ☐
(e.g. a nurse, G.P., company doctor)

In the last 12 months have you checked the following areas for moles or unusual skin changes :

your entire body? No ☐ Yes ☐ If 'Yes', how many times ?

areas of your body regularly exposed to the sun ? No ☐ Yes ☐ If 'Yes', how many times ?

In the last 12 months, how many times have you had a red sunburn that lasted a day or more?
Circle the correct box

None ☐ 1 time ☐ 2 times ☐ 3 times ☐ 4 times ☐ 5 or more times ☐

Have you had skin cancer? Yes ☐ No ☐

Have any of your close friends or family had skin cancer? Yes ☐ No ☐

About Your Job

What is your job/trade?

On average, how many hours a day do you work outside?

Have you ever had any training on the risks of working in the sun? Yes ☐ No ☐

If 'Yes', was this within the last 12 months? Yes ☐ No ☐

About Working Outside

Look at each of the points listed below, choose and tick the answer which matches what you normally do when working outdoors in the summer:

	I don't do this and I'm not thinking about starting	I don't do this but I'm thinking about starting	I don't do this, but I'm planning to start in the next month	I do this and began to do it in the last 12 months	I do this and have done so for more than a year
avoid/minimise work in sunlight in the middle of the day					
swap jobs to minimise the amount of time working in the sun					
use a shade/cover when you're working in the sun					
wear long sleeved, loose fitting tops and trousers					
wear a safety helmet with neck protection					
wear sunglasses					
use sun lotion/ sun screen					
drink plenty of water					
check the UV index forecast for the day					
regularly check skin for moles or unusual changes					

Choose and circle 'Agree' or 'Don't Know' or 'Disagree' to each of the following statements:

- I don't need to wear sun lotion/screen on a cloudy or overcast day
- It is important to wear sun glasses to protect the eyes from the sun
- Sun exposure is the most important risk factor for skin cancer
- If I apply factor 30 sun lotion, I only need to apply it once a day
- I like to have a sun tan
- I think I am at risk of skin cancer
- Sun protection is important when working outside for less than one hour

Agree	Don't Know	Disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This questionnaire will be followed by another short questionnaire a few months from now. By supplying your home postcode we can use this as a unique, easily remembered, reference to match this and further questionnaires from you.

Therefore, please provide your home postcode

Thank you for completing this questionnaire

We would be grateful if you would supply your contact details. This will enable us to (1) contact you if you have won the prize draw and (2) send a short follow up questionnaire directly to you in a few months.

This is voluntary – you can still hand in your completed questionnaire without giving these details.

We guarantee none of your contact details will be passed to or shared with any third parties.

Your Name:

House Number (or Name):

Telephone Number:

E-mail:



U.V. Exposure & Skin Cancer

... *sun safety toolkit (film)*



The University of
Nottingham

Questionnaire: Follow up



Sun Safety
in construction



The University of Nottingham

UNITED KINGDOM • CHINA • MALAYSIA

The Institution of Occupational Safety and Health (IOSH), with the support of the Health and Safety Executive, has commissioned a research study to investigate workers' sun safety knowledge and use of protective measures at work.

You kindly completed a questionnaire, as a part of this study, in the summer of 2012. This follow-up questionnaire assesses whether any changes have occurred in your sun safety knowledge and use of protective measures one year on. The questionnaire should only take you 5 minutes to complete.

By answering these questions you will help to produce research that will be used to improve awareness of skin cancer, highlight ways to minimize the risks and to develop practical sun safety guidelines for the UK construction sector.

Please return your completed questionnaire in the enclosed pre-paid envelope by no later than

31 August 2013.

(Alternatively, complete the questionnaire online at <https://www.surveymonkey.com/s/sun-safety>)

Prize Draw

As a 'Thank You' for your involvement, all fully completed questionnaires returned will be entered into a prize draw with the chance to win one of **THREE** driving experiences in an Aston Martin (or similar car) on an organised driving day.



Paul, a joiner from the North-East, won the last prize draw of an Aston Martin driving experience



YOU could be one of the **THREE** lucky winners of the next **Prize Draw**

Just complete & return your questionnaire today

The winners will be informed during October 2013.

Your rights

- Completion of this questionnaire is voluntary. Should you wish, you may cease to complete the questionnaire at any point.
- All data collected is confidential – neither your employer or IOSH will be able to identify individuals.
- All data will be processed and stored in accordance with the Data Protection Act.
- It is unlikely that participation in this study will cause you any distress. However, should the questionnaire raise any issues that you would like to discuss with an appropriately trained professional please contact your G.P.
- The study findings will be made available at <http://www.iosh.co.uk>. In mid 2014. The data will be used within academic articles and the project lead's PhD study.

Project lead: Paul Madgwick; E: sunsafetyuk@gmail.com; T: 07971 810389.

Academic lead: Dr Jonathan Houdmont, University of Nottingham; E: jonathan.houdmont@nottingham.ac.uk

PLEASE TURN OVER FOR THE QUESTIONNAIRE

	Today's date:	Your first name:	Your surname:
	Have you viewed the sun safety in construction DVD?	Home address:	
Yes / No (delete as appropriate)			

Part 1: Sun Safety Knowledge

	Agree	Unsure	Disagree
I don't need to wear sun screen/lotion on a cloudy/overcast day			
It is important to wear sunglasses to protect the eyes from the sun			
Sun exposure is the most important risk factor for skin cancer			
If I apply factor 30 sun screen I need only apply it once per day			
I like to have a sun tan			
I think I am at risk of skin cancer			
Sun protection is important when working outside for less than one hour			

Part 2: Sun Safety Behaviours

For each of the following sun safety measures choose the answer that matches what you normally do when working outdoors in the summer.

	I don't do this and I'm not thinking about starting	I don't do this but I am thinking about starting	I don't do this but I'm planning to start in the next month	I do this and began in the last 12 months	I do this and have done so for more than a year
Avoid/minimize work in sunlight in the middle of the day					
Swap jobs to minimize the amount of time spent working in the sun					
Use a shade/cover when working in the sun					
Wear long-sleeved loose-fitting tops and trousers					
Wear a safety helmet with neck protection					
Wear sunglasses					
Use sun screen/lotion					
Drink plenty of water					
Check the UV index for the day					
Regularly check skin for moles or unusual changes					

Part 3: Sun Safety Culture

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Remembering to use sun protection has high importance within my workplace					
I feel ok about applying sunscreen in front of my work mates					
I would tell my work mate if I thought he/she was getting sun burnt					
If use of sun safety measures was a site rule I would follow it					

Thank you for completing this questionnaire.

Please place it in the enclosed pre-paid envelope and post it back to us by no later than 31 August 2013



U.V. Exposure & Skin Cancer

... what's happening now

- Analysis of the Focus Groups completed with construction workers and supervisors
- Sending out the follow up questionnaires
- Presenting interim findings and promoting awareness of skin cancer and solar radiation



The University of
Nottingham

UNITED KINGDOM • CHINA • MALAYSIA



U.V. Exposure & Skin Cancer ... a final thought

*It is estimated that 90% of all skin cancer deaths
could be prevented if people properly controlled
their exposure to the sun's U.V. radiation*

(T.U.C. - Skin Cancer and Outdoor Workers : Guidance for Safety
Representatives - 2009)

Help to make a difference in construction
... raise awareness



The University of
Nottingham



Sun Safety *in construction*

For further information, please contact:

Paul Madgwick : Project Lead

Email: sunsafetyuk@gmail.com

Mobile: 07971 810389



The University of
Nottingham

UNITED KINGDOM • CHINA • MALAYSIA