

**Table 2.3. Cohort studies of sun exposure and non-melanocytic cell carcinoma (basal and squamous)**

Reference, location, name of study	Cohort description	Exposure assessment	Exposure categories	No of cases	Relative risk (95% CI)	Adjustment for potential confounders	Comments
Grodstein <i>et al.</i> (1995), USA, Nurses' Health Study	107 900 mostly white female nurses, 30–55 yrs, 1982–1990	Self-administered questionnaire	<i>Lifetime No. sunburns</i> None 1–2 3–5 6+	<b>SCC</b> 197	1.0 1.1 (0.6–1.8) 1.7 (1.0–2.8) 2.4 (1.5–4.0)	Age, region, hair colour, skin reaction to sun, cig smoking	
Han <i>et al.</i> (2006), USA, Nurses' Health Study	Nested case-control; 32 826 female Caucasian registered nurses who gave blood specimen in 1989–90; follow-up till mid 1998; one control per case matched by age	Retrospective self-administered questionnaire	<i>Lifetime severe sunburn</i> None 1–4 5–9 10+	<b>BCC</b> 283	1.0 1.4 (0.9–2.1) 1.5 (1.0–2.6) 1.4 (0.8–2.2)	Age, family history of skin cancer, sunbed use, total sun in bathing suit, baseline geog region	Indoor occupational cohort; BCCs self-reported; SCCs histol-confirmed
			<i>Total sun in bathing suit</i> Low Intermediate High		1.0 1.7 (1.1–2.5) 2.1 (1.4–3.1)		
			<i>Lifetime severe sunburn</i> None 1–4 5–9 10+	<b>SCC</b> 275	1.0 1.7 (1.1–2.5) 1.9 (1.1–3.1) 1.7 (1.0–2.7)		
			<i>Total sun in bathing suit</i> Low Intermediate High		1.0 1.3 (0.9–1.9) 2.0 (1.4–3.2)		

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Green <i>et al.</i> (1996) Nambour, Australia	1675 randomly selected adults from community register, 18–69 yrs, skin cancer diagnoses followed up 1985–1992, 81% follow-up	Self-administered questionnaire	<i>Lifetime sunburns</i>	<b>SCC</b> 94	1.0	Age, sex		
			None		1.7 (0.7–4.4)			
			1–5		3.3 (1.5–7.4)			
			6–9		3.3 (1.4–7.6)			
			10+					
			<i>Occupation</i>					
			Mainly indoors		1.0			Age, sex, skin colour
			Indoors/outdoors		0.8 (0.5–1.4)			
			Mainly outdoors		1.4 (0.8–2.3)			
			<i>Recreation</i>					
			Mainly indoors		1.0			
			Indoors/outdoors		0.8 (0.4–1.8)			
			Mainly outdoors		1.3 (0.7–2.5)			
			<i>Elastosis neck</i>					
			None		1.0			Age, sex
Mod	4.6 (1.9–10.9)							
Severe	5.9 (2.4–14.8)							
<i>Actinic keratoses</i>								
None	1.0							
1–10	3.8 (1.7–8.5)							
11+	13.9 (6.3–30.8)							

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Neale <i>et al.</i> (2007) (Green <i>et al.</i> 1996) Nambour, Australia	1517 randomly selected adults from community register, 25–74 yrs, skin cancer diagnoses followed up 1992–2004, 94% follow-up	Baseline self-administered questionnaire	<i>Lifetime sunburns</i>		<b>BCC</b> 175	<i>Head</i>			
			None	1.0		Age, sex			
			1–5	1.0 (0.6–1.5)					
			6–9	1.4 (0.7–2.6)					
			10+	1.8 (0.9–3.5)					
			<i>Trunk</i>				94	<i>Head</i>	
			None	1.0					
			1–5	1.4 (0.7–2.8)					
			6–9	1.8 (0.7–4.2)					
			10+	2.5 (1.0–6.0)					
			<i>Occupation</i>					<i>Head</i>	
			Mainly indoors	1.0			<i>Trunk</i>		
			Indoors/outdoors	1.0 (0.6–1.5)			<i>Head</i>		
			Mainly outdoors	0.9 (0.5–1.4)	<i>Trunk</i>				
			Mainly indoors	1.0	<i>Head</i>				
			Indoors/outdoors	1.1 (0.6–1.9)	<i>Trunk</i>				
			Mainly outdoors	1.1 (0.6–2.1)	<i>Head</i>				
			<i>Recreation</i>		<i>Head</i>				
			Mainly indoors	1.0	<i>Trunk</i>				
			Indoors/outdoors	0.9 (0.6–1.3)	<i>Head</i>				
			Mainly outdoors	1.0 (0.6–1.6)	<i>Trunk</i>				
			Mainly indoors	1.0	<i>Head</i>				
			Indoors/outdoors	1.1 (0.6–2.1)	<i>Trunk</i>				
Mainly outdoors	0.8 (0.3–2.2)	<i>Head</i>							
<i>Solar lentigines</i>		<i>Head</i>							
None	1.0	<i>Trunk</i>							
Mild	1.2 (0.8–1.8)	<i>Head</i>							
Mod-heavy	1.6 (1.1–2.5)	<i>Trunk</i>							
None	1.0	<i>Head</i>							
Mild	2.6 (1.3–5.0)	<i>Trunk</i>							
Mod-heavy	3.5 (1.8–6.7)	<i>Head</i>							

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Neale <i>et al.</i> (2007) (Green <i>et al.</i> 1996) (contd)			<i>Actinic keratoses</i>		<i>Head</i>		
			None		1.0		
			1-4		2.3 (1.5-3.5)		
			5-9		2.4 (1.4-4.2)		
			10+		3.2 (1.9-4.3)		
			<i>Trunk</i>		1.0		
			None		1.0		
			1-4		2.4 (1.3-4.1)		
			5-9		2.8 (1.3-5.6)		
			10+		3.7 (1.9-7.3)		
van Dam <i>et al.</i> (1999), USA, Health Professionals' Follow-up Study	44 591 male health professionals, cancer-free, 40-75 yrs, 1986-1994	Self-administered questionnaire	<i>Lifetime severe sunburn</i>	<b>BCC</b> 3273	1.0	Age, time period, hair colour, eye colour, ancestry, skin reaction to sun, BMI  +region of residence	Indoor occupational cohort, BCCs self-reported
			None		1.1 (1.0-1.3)		
			1-2		1.2 (1.1-1.4)		
			3-5		1.3 (1.1-1.5)		
			6-9		1.5 (1.3-1.7)		
			10+				
			<i>Frequency out in bathing suit in summer as teenager</i>				
			< 1/week		1.0		
			1/week		1.1 (1.0-1.3)		
			2/week		1.2 (1.1-1.4)		
Several /week	1.3 (1.1-1.5)						
Daily	1.5 (1.3-1.7)						
<i>Ambient sun region residence</i>							
Low	1.0	+freq out in swim suit as teenager					
Medium	1.0 (0.9-1.1)						
High	1.5 (1.4-1.6)						