Overview of sunlight exposure messages

At the request of the Public Health Advisory Committee (PHAC) on Sunlight Exposure, NICE compiled a summary of the current information available from a range of organisations interested in reducing the risks of sunlight and promoting the benefits of sun exposure. The information collected was not considered to be an exhaustive review of information available, but a working document on key sources of advice from authoritative sources.

Information was originally compiled (in June 2014) from online and printed information from NHS Choices, SKCIN (the Karen Clifford Skin Cancer Charity), the British Skin Foundation, NICE, the Consensus Statement on Vitamin D, Cancer Research UK and the British Association of Dermatology. On the advice of PHAC, the paper was subsequently updated (in July 2014) in include information from the MET Office and the Health and Safety Executive.

Table 1 Recommended time of the day and season for sun exposure

	Skin Cancer Prevention/ Shade	**Vitamin D Production**	**Factors related to UV rays**
NHS CHOICES: SUN SAFETY (I), (II) &(III)	Avoid it between 11am-3pm	-	The summer sun is most damaging to your skin in the middle of the day
NHS CHOICES: SUNLIGHT & VITAMIN D	-	Most effective Vitamin D production between 11am-3pm - from April to October to make enough vitamin D. Not possible from November to March in the UK because sunlight has not enough ultraviolet B radiation	-
SKCIN	Avoid sunlight exposure from 11am-3pm and seek shade (UV radiation is more intense, especially in the British summertime). Depends on the time of the year	-	-
BRITISH SKIN FOUNDATION	Shelter between 11am-3pm (10	-	-

	Skin Cancer Prevention/ Shade	Vitamin D Production	Factors related to UV rays
	min and pale skin burns)		
NICE GUIDANCE: VITAMIN D	-	In winter months, the UK population relies on body stores and dietary sources to maintain vitamin D levels	-
NICE GUIDANCE: SKIN CANCER	Avoid it between 11am-3pm Protect the skin when it is sunny, both in the UK and abroad	Difficult to determine how much sunlight is needed to produce a given level, as the length of time needed to synthesise vitamin D depends upon several factors. These include skin type, the amount of skin exposed, the time of day and year and how far someone is from the equator	-
CONSENSUS VITAMIN D STATEMENT	-	Vitamin D production, which is greatest around two hours either side of solar noon, and during summer months However, the best estimates suggest that for most people, everyday casual exposure to sunlight is enough to produce	The amount of UVB in sunlight changes substantially with season, latitude and time of day

	Skin Cancer Prevention/ Shade	Vitamin D Production	Factors related to UV rays
		vitamin D in the summer months, provided optimal environmental conditions	
CRUK-SUNSMART	Especially careful between 11am and 3pm during UK summer. Shade between 11am and 3pm	-	Time of year - highest risk months in the UK are May to September. Between October and March in the UK even people with fair skin shouldn't need to protect themselves Altitude - UV rays are stronger the higher you go Cloud cover - even on overcast skies, 30-40% of UV will still penetrate Reflection - about 75% of harmful rays are reflected back from snow, 15% from sand, 10% from concrete and 5-10% from water (depending on how choppy it is).
BRITISH ASSOCIATION OF DERMATOLOGY (I) & (II)	Time in the shade between 11am-3pm to prevent skin cancer Protective Shade (Sunscreen	Greatest around two hours either side of solar noon, and during summer months Also depends on the time of the	The amount of UVB in sunlight changes substantially with season, latitude and time of day. Reflections of the sun rays: water, snow, sand

	Skin Cancer Prevention/ Shade	Vitamin D Production	Factors related to UV rays
	should not be used as an alternative to shade)	day Small amounts of incidental sunlight (just exposing face and forearms would be enough for vitamin D synthesis). Do not sunbathe	
HSE (I), (II)	Stay in the shade whenever possible, during your breaks and especially at lunch time. As an employer you can Encourage workers to take their breaks in the shade, if possible, rather than staying out in the sun	-	UV radiation should be considered an occupational hazard for people who work outdoors
The MET Office (I), (II) , (III)	Seek shade from trees, umbrellas and canopies to reduce your exposure to UV radiation, especially when the sun is at its strongest between 11am and 3pm	-	Ultraviolet (UV) radiation from the sun can have both positive and negative effects on human health. Your body produces vitamin D when exposed to UV radiation from the sun The UV forecast identifies the peak strength of the ultraviolet

	Skin Cancer Prevention/ Shade	Vitamin D Production	Factors related to UV rays
			(UV) radiation from the sun at a particular place on a particular day. UV rays can cause damage to the skin and can cause sunburn - which may lead to skin cancer In the UK the forecast is predominately throughout the summer months, with late June seen as the peak, however this is dependent on weather conditions. Up to 80% of the sun's UV rays penetrate light clouds, and what gets through can reflect back and forth between the clouds and the snow. Even if it's cloudy it's important to protect yourself UV rays from winter sun can actually be more damaging in alpine regions because you absorb both the direct UV rays from the sun and the diffuse UV rays reflected off of the snow

Table 2 Recommended length of sun exposure

	Skin Cancer Prevention	Vitamin D Production
NHS CHOICES: SUN SAFETY (I), (II) &(III)	Don't spend any longer in the sun than you would without sunscreen	-
NHS CHOICES: SUNLIGHT & VITAMIN D	Cover up or protect your skin before it starts to turn red or burn. The longer you stay in the sun, especially for prolonged periods without sun protection, the greater your risk of skin cancer	The amount of time you need to spend in the sun for your skin to make enough vitamin D depends on a number of factors. These include your skin type (how dark your skin is or how easily you get sunburnt), the time of year and what time of day it is 10-15 min per day for most-lighter skinned people, and is less than the time it takes you to start going red or burn Short daily periods of sun exposure without sunscreen during the summer months (April to October) are enough for most people to make enough vitamin D
SKCIN	-	15-20 min per day of unprotected sun exposure to produce the required vitamin D level, outside the dangerous 11am to 3pm time. For most people just going about their normal business in the summer months is sufficient to produce the required vitamin D levels.

	Skin Cancer Prevention	Vitamin D Production
		*We certainly don't need to sunbathe to make enough vitamin D
BRITISH SKIN FOUNDATION	-	-
NICE GUIDANCE: VITAMIN D	-	-
NICE GUIDANCE: SKIN CANCER	-	-
CONSENSUS VITAMIN D STATEMENT	The time required to make sufficient vitamin D is typically short and less than the amount of time needed for skin to redden and burn	Exposure to ultraviolet B (UVB) radiation in sunlight is the most efficient way to boost vitamin D supply but it is still unclear how much sunlight is required to produce a given level of 25(OH)D. Environmental and personal factors greatly affect vitamin D production in the skin, making it difficult to recommend a one-size-fits-all level of exposure for the general population Regularly going outside for a matter of minutes around the middle of the day without sunscreen should be enough. When it comes to sun exposure, little and often is best, and the more skin that is exposed, the greater the chance of making sufficient vitamin D before burning. The true amount of time may be greater and

	Skin Cancer Prevention	Vitamin D Production
		will vary depending on other factors including posture, time of day, outdoor activities, and - the presence of shading structures
CRUK-SUNSMART	Enjoying the sun safely, while taking care not to burn, should help most people get a good balance. You shouldn't have to redden or burn	The amount of time you need in the sun to make enough vitamin D is different for each person. It also depends on skin type, time of day, time of year, and where you are in the world. Not possible to give a 'one size fits all' recommendation on how much sun is needed to make enough vitamin D. But most people should be able to make enough from short, casual exposures like you might get just by going about your daily life. Spending a long time in the sun will not give you any extra vitamin D
BRITISH ASSOCIATION OF DERMATOLOGY (I) & (II)	Some sunshine before sunburn level. Long exposures can break down vitamin D, reducing benefits whilst increasing risk of skin cancer	The time to make significant vitamin D varies according to a number of factors(typically short and less than the amount of time needed for the skin to redden and burn) *Once your body has produced its maximum amount of vitamin D, extra sunlight does not

	Skin Cancer Prevention	Vitamin D Production
		increase production and will result in skin damage
HSE (I), (II)	If work keeps you outdoors for a long time your skin could be exposed to more sun than is healthy for you	-
The MET Office (I), (II) , (III)	The amount of time you need to spend in the sun to generate enough vitamin D by spending just a few minutes in the sun. This means people can take the necessary precautions to protect themselves from burning and reduce their risks of developing skin cancer whilst still enjoying the health benefits from sunlight	The amount of time you need to spend in the sun to generate enough vitamin D by spending just a few minutes in the sun. This means people can take the necessary precautions to protect themselves from burning and reduce their risks of developing skin cancer whilst still enjoying the health benefits from sunlight

Table 3 Sun Protection

	Sunscreen	**Clothing**
NHS CHOICES: SUN SAFETY (I), (II) &(III)	SPF: 15 (at least) STARS: The higher the number of stars, the greater protection broad-spectrum sunscreen (UVA & UVB) (Make sure the product is not past its expiry date) How much: - When: - Reapplication: After swimming (even waterproof) Vitamin D: -	Wearing a wide-brimmed hat can reduce the amount of UV rays that reach your face and eyes Sunglasses: Choose a pair that has one of the following: the CE Mark and British Standard (BS EN 1836:2005) ; a UV 400 label ; a statement that the sunglasses offer 100% UV protection
NHS CHOICES: SUNLIGHT & VITAMIN D	SPF: 15 (at least) STARS: - How much: - When: - Reapplication: - Vitamin D: -	The larger the area exposed to sun, the more chance of making enough vitamin D before you start to burn Covered up for most of the time to avoid skin cancer
SKCIN	SPF: +30 STARS: Three stars rating minimum How much: use enough (2mg/cm2; 35 ml one full body application (If it is too much, reapply once you are in the sun) When: 20 minutes before Reapplication: every two hours	Sun hat (broad-brimmed hat that shades your face, neck, ears), wrap-around sun glasses with UV protection UPF in Clothing Shoulders always covered up

	Sunscreen	Clothing
	Vitamin D: -	
BRITISH SKIN FOUNDATION	SPF: 30 STARS: Four or five stars rating How much: Generously When: 20-30 minutes before Reapplication: every two hours Vitamin D: -	FIRST LINE DEFENCE: hat, t-shirt, UV-Protective Sunglasses
NICE GUIDANCE: VITAMIN D	SPF: - STARS: - How much: - When: - Reapplication: - Vitamin D: -	-
NICE GUIDANCE: SKIN CANCER	SPF: 15 (at least) STARS: At least four stars and the UVA logo. A broad spectrum sunscreen which offers both UVA and UVB protection. Water resistant products if sweating or contact with water is likely How much: Liberally When: 30 min before and after going out in the sun (don't forget your head, neck and ears) Reapplication: Re-apply at least every 2 hours and immediately after being in water, even if	Wear clothing that protects areas which may be vulnerable to burning A broad-brimmed hat that shades the face, neck and ears, a long-sleeved top and trousers. Where possible, choose close-weave fabrics that don't allow the sun through

	Sunscreen	Clothing
	the sunscreen is 'water resistant'. Also re-apply after towel drying Vitamin D: -	
CONSENSUS VITAMIN D STATEMENT	SPF: STARS: How much: When: Reapplication: Vitamin D: Some studies have found that sunscreen use reduces vitamin D production. Based on studies and trials that reflect actual sun exposure habits, it is unlikely that these products contribute significantly to vitamin D deficiency	-
CRUK-SUNSMART	SPF: 15 (at least) STARS: high star rating. Sunscreens with higher factors don't provide much more protection against UVB radiation. For example, an SPF15 sunscreen filters out 93% of UVB radiation, while an SPF30 sunscreen filters out 96%. Higher factor sunscreens may lure people into a false sense of security. You should never use sunscreen in order to spend longer in the sun. No sunscreen can provide 100% protection	The best way to enjoy the sun safely and protect your skin from sunburn is to use a combination of shade, clothing and sunscreen Wear a t-shirt, hat and sunglasses (UV 400 label) and protection at the side of the eye

	Sunscreen	Clothing
	How much: Generously When: - Reapplication: regularly, even water resistant or waterproof Vitamin D: -	
BRITISH ASSOCIATION OF DERMATOLOGY (I) & (II)	SPF: 30 STARS: high number of stars How much: 2mg/cm2 When: 15 to 30 minutes before Reapplication: Liberally at least every 2 hours, especially after exposure to water, sweating, towel drying and any form of abrasion *There is a vast range of different product types available -lotions, mousses, sprays and gels. Not possible to give a set amount that you should apply that is the same for all products. Individual manufacturers can provide further details. Vitamin D: Unlikely that these products contribute significantly to vitamin D deficiency	Protective clothing, hat, t-shirt, sunglasses Sunscreen should not be used as an alternative to clothing
HSE (I), (II)	SPF: High factor (15 at least) STARS: - How much: Apply it as directed on the product When: -	Encourage workers to keep covered up during the summer months - especially at lunch time when the sun is at its hottest. They can cover up with a long-sleeved shirt, and a hat with a brim or flap that protects the ears and neck

	Sunscreen	**Clothing**
	Reapplication: - Vitamin D: -	
The MET Office (I), (II) , (III)	SPF: high factor (appropriate sun cream for your particular type of skin, at least 15) STARS: four stars or more How much: liberally When: Reapplication: at regular intervals during the day Vitamin D:	When the skin is covered the better it is protected. Tightly woven, loose-fitting clothes will provide more protection from UV radiation. A wide brim hat will protect your face and head, while a good pair of sunglasses, that offer 100% UV protection, will protect your eyes

Table 4 Skin facts

	Type of skin	High risk groups skin cancer
NHS CHOICES: SUN SAFETY (I), (II) &(III)	-	Lots of moles or freckles; a personal or family history of skin cancer; already had sunburn, especially when young; fair skin that burns in strong sun; red or fair hair; people with naturally brown or black skin are less likely to get skin cancer as darker skin has some protection against UV rays- skin cancer can still occur
NHS CHOICES: SUNLIGHT & VITAMIN D	There isn't one recommendation for everyone. Darker skin, longer in the sun; fair skin, shorter in the sun	-
SKCIN	-	More than 40 moles or atypical; closed relative with melanoma (even if you are darker); very fair skinned, red or fair hair, blue, green or hazel eyes, freckles, and tan poorly or burn easily; black skin: caution with soles of feet and palms. Outdoor hobbies, sports or jobs
BRITISH SKIN FOUNDATION	-	-

	Type of skin	High risk groups skin cancer
NICE GUIDANCE: VITAMIN D	-	-
NICE GUIDANCE: SKIN CANCER		Those with a lot of moles (more than 50); those with a personal or family history of skin cancer; those with fair skin: people with skin types I and II burn rapidly (those with skin types III and IV are at risk in strong sunshine and during prolonged UV exposure, those with skin types V and VI are at risk during prolonged UV exposure); children (babies are at greatest risk of burning and should be kept out of direct sunlight) and young people; outdoor workers; those who are immuno-suppressed; those who put themselves at risk of overexposure to UV by sunbathing or by using indoor tanning devices such as sunbeds and sunlamps
CONSENSUS VITAMIN D STATEMENT	The area of skin exposed will also influence the amount of vitamin D made after sun exposure. People should get to know their own skin to understand how long they can spend outside before risking sunburn under different conditions	-
CRUK-SUNSMART	Type I: Often burns, rarely tans. Tends to have freckles, red or fair hair, blue or green eyes Type II: Usually burns, sometimes tans. Tends	Lots of moles or freckles; a personal or family history of skin cancer; a history of sunburn; fair skin that burns easily in strong sun; red or

	Type of skin	High risk groups skin cancer
	to have light hair, blue or brown eyes Type III: Sometimes burns, usually tans. Tends to have brown hair and eyes Type IV: Rarely burns, often tans. Tends to have dark brown eyes and hair Type VI: Naturally black-brown eyes and hair	fair hair; light-coloured eyes. People with brown or black skin can develop cancer in soles of their feet
BRITISH ASSOCIATION OF DERMATOLOGY (I) & (II)	Recommendation regarding sun protection (clothing, shade and sunscreen) should be used in conjunction with the skin type guide. Personal skin type influences the amount of sunlight recommended to avoid skin damage and to make optimum amounts of vitamin D. People should get to know their own skin Phototype 1: fair skin that burns very easily in the sun and does not tan. Regularly apply lots of SPF sunscreen (30 or above) with high UVA protection too. Wear protective clothing, sunscreen and spend time in the shade during the hottest parts of the day. In white-skinned people, casual short sun exposures a few times per week, taking particular care not to burn and avoiding deliberate tanning, can help provide the benefits of vitamin D while minimising risks Phototype 5 and 6: need sunscreen during intense or prolonged exposure	People with 50 or more moles; personal or family history of skin cancer; very fair skin that easily burns; those with red hair and freckles, less able to cope with UV radiation; being treated with immunosuppressive drugs

	Type of skin	High risk groups skin cancer
	Uncertainty regarding the risk/benefit balance of sunlight in people of different skin types and colours	
HSE (I), (II)	-	Fair or freckled skin that doesn't tan, or goes red or burns before it tans; red or fair hair and light coloured eyes; a large number of moles
The MET Office (I), (II) , (III)	-	-

Table 5 Vitamin D

	High risk group – Vitamin D deficiency (rickets/osteomalacia)	**Vitamin D production without sunlight**
NHS CHOICES: SUN SAFETY (I), (II) &(III)	Developmental stage: - Ethnicity: - Health conditions: - Other circumstances: -	Optimal levels of vitamin D: - Diet/Supplements: -
NHS CHOICES: SUNLIGHT & VITAMIN D	Developmental stage: Babies and children from 6 months to 5 years old (unless they are having more than 500ml a day of infant formula); pregnant and breastfeeding women; people aged 65 and over Ethnicity: People who have darker skin – African, African Caribbean or South Asian origin Health conditions: - Other circumstances: Those who cover their skin, housebound or confined indoors for long periods	Optimal levels of vitamin D: - Diet/Supplements: Eggs, meat, oily fish (salmon, mackerel, sardines) Vitamin D is also added to all infant formula milk, as well as some breakfast cereals, soya products, dairy products, powdered milks and fat spreads It is important that pregnant and breastfeeding women take a vitamin D supplement * People who take supplements are advised not to take more than 25 micrograms (µg) of vitamin D a day, as intakes from supplements above this amount could be harmful
SKCIN	Developmental stage: - Ethnicity: - Health conditions: - Other circumstances: -	Optimal levels of vitamin D: - Diet/Supplements: milk, fish, egg yolks, and fortified cereals

	High risk group – Vitamin D deficiency (rickets/osteomalacia)	Vitamin D production without sunlight
BRITISH SKIN FOUNDATION	Developmental stage: - Ethnicity: - Health conditions: - Other circumstances: -	Optimal levels of vitamin D: - Diet/Supplements: -
NICE GUIDANCE: VITAMIN D	Developmental stage: - Ethnicity: - Health conditions: - Other circumstances: -	Optimal levels of vitamin D: Diet/Supplements: Oily fish, egg yolk, read meat, fortified food. Supplements containing vitamin D are available on prescription or for sale from pharmacies or shops. However, there is a wide variation in the content and cost and some products may not be suitable for particular at risk groups At risk groups: 8.5 micrograms/day for infants aged 0–6 months, 7 micrograms/day for older infants and children up to their 4th birthday and 10 micrograms/day for adults
NICE GUIDANCE: SKIN CANCER	Developmental stage: - Ethnicity: - Health conditions: - Other circumstances: -	Optimal levels of vitamin D: - Diet/Supplements: -
CONSENSUS VITAMIN D STATEMENT	Developmental stage: Young children; pregnant and breastfeeding women; older people Ethnicity: Darker-skinned people	Optimal level of vitamin D: No standard definition of an 'optimal' level of vitamin D Diet/Supplements: Little contribution based on dietary sources. Vitamin D supplements,

	High risk group – Vitamin D deficiency (rickets/osteomalacia)	Vitamin D production without sunlight
	Health conditions: Skin cancer patients Other circumstances Those who wear whole-body coverings, those living in institutions, those who avoid the sun	fortified fat spreads and dietary sources such as oily fish (including salmon, trout and sardines), fish oils, liver, meat and eggs can be useful for helping to maintain sufficient levels of vitamin D (particularly important during the winter). There is not enough evidence to support a recommendation for food fortification or widespread vitamin D supplementation for the general population
CRUK-SUNSMART	Developmental stage: Older people who don't go outside much; pregnant women; breastfeeding babies with vitamin D-deficient mothers Ethnicity: people with naturally brown or black skin Health conditions: - Other circumstances: People who wear clothing that fully conceals them; people who avoid the sun	Optimal levels of vitamin D: - Diet/Supplements: The government recommends 10 microgram supplement vitamin D a day
BRITISH ASSOCIATION OF DERMATOLOGY (I) & (II)	Developmental stage: Young children; pregnant and breastfeeding women; older people Ethnicity: Darker-skinned people Health conditions: Certain patient groups Other circumstances: Those who wear whole-body coverings or live in institutions. The	Optimal level of vitamin D: Uncertainty regarding 'optimal' or 'sufficient' levels of vitamin D Diet/Supplements: Helpful to maintain levels of vitamin D, particularly important during the winter and among people at higher risk of vitamin D deficiency. Not enough evidence to

	High risk group – Vitamin D deficiency (rickets/osteomalacia)	**Vitamin D production without sunlight**
	government recommend this groups take a 10 microgram vitamin D supplement a day	support a recommendation for food fortification or widespread vitamin D supplementation for the general population (can build up to toxic)
HSE (I), (II)	-	-
The MET Office (I), (II) , (III)	-	-

Table 6 Sun exposure and vitamin d advice for babies and toddlers, children and parents

	Babies and Toddlers	Children	Parents and Carers
NHS CHOICES: SUN SAFETY (I), (II) &(III)	Under age of 6 months out of direct sunlight, especially around midday	SPF 15 (at least) 4/5 stars in areas not protected by clothing, even on cloudy or overcast days Choose sunscreens that are formulated for children and babies' skin, as these are less likely to irritate their skin Wear a hat and sunglasses that meet British standards and carry 'CE' mark If swimming, use a waterproof sunblock factor 15 or above (reapply after towelling)	Encourage child to play in the shade specially between 11am-3pm
NHS CHOICES: SUNLIGHT & VITAMIN D	-	A lack of vitamin D – known as vitamin D deficiency – can cause bones to become soft and weak, which can lead to bone deformities. In children, for example, a lack of vitamin D can lead to rickets	-
SKCIN	Under 6 month out of direct	SPF 30+ minimum; 5 stars UVA	Take responsibility to protect skin

	Babies and Toddlers	Children	Parents and Carers
	sunlight, especially around midday. Keep toddlers and babies in the shade as much as possible	rating 20 min before going outdoors. No water resistant products before 3 years old. Use over 3 years old when swimming, and reapply immediately after towelling Reapply every 2h and more if in and out of the water Shoulders, ears, nose, cheeks and top of feet UV suits are an excellent investment for young children Shade as much as possible * Children can still burn even on overcast days	and eyes (must take responsibility for protecting children's skin and eyes, as they cannot be expected to undertake sun protection themselves) Act as good role models and set a good example *It is imperative that children are educated about sun protection and sensible precautions
BRITISH SKIN FOUNDATION	Kept out of direct sunlight	-	-
NICE GUIDANCE: VITAMIN D	-	At risk of vitamin D deficiency	-
NICE GUIDANCE: SKIN CANCER	-	Hats, other clothing and sunscreen to protect themselves	Encourage parents to provide their children with sunscreen
CONSENSUS VITAMIN D STATEMENT	7 micrograms a day (from 6 months)	7 micrograms a day (until 5 years)	-

	Babies and Toddlers	**Children**	**Parents and Carers**
CRUK-SUNSMART	Keep babies under six months out of direct sunlight, especially around midday. Extra protection from the sun	Extra protection from the sun. With fair or red hair, pale eyes or freckles are at most risk	Set good habits for the future. Teaching children how to enjoy the sun safely while they are young sets a good pattern for later life.
BRITISH ASSOCIATION OF DERMATOLOGY (I) & (II)	-	Stay in the shade when possible, especially during breaks and in the middle of the day (11am to 3 pm). Risk of rickets in children due to low vitamin D levels 7 micrograms a day of vitamin D supplements for children aged 6	-
HSE (I), (II)	-	-	-
The MET Office (I), (II) , (III)	It is important that extra care is taken with children and babies	It is important that extra care is taken with children and babies	-

Table 7 Sunbeds and tan

	Sunbeds and tan
NHS CHOICES: SUN SAFETY (I), (II) &(III)	Sunbeds are not a safe alternative to lying outside in the sun. Skin will still be exposed to harmful UV rays. Health risks linked to sunbeds and other UV tanning equipment include skin cancer, premature ageing of skin, sunburnt skin, dryness and itching, bumpy rashes, eye irritation, cataracts
NHS CHOICES: SUNLIGHT & VITAMIN D	-
SKCIN	Not safe. Can cause skin cancer. Switch to sunless tanning options
BRITISH SKIN FOUNDATION	-
NICE GUIDANCE: VITAMIN D	-
NICE GUIDANCE: SKIN CANCER	-
CONSENSUS VITAMIN D STATEMENT	Do not grant protection against vitamin D deficiency. Sunbed use is accompanied by a high frequency of sunburns, which are linked to a higher risk of melanoma
CRUK-SUNSMART	Sunbeds can cause skin cancer. Fake tan is safer
BRITISH ASSOCIATION OF DERMATOLOGY (I) & (II)	A tan is a sign that our skin has been harmed by UV and is trying to defend itself against further damage. Sunbeds increases the risk of

	Sunbeds and tan
	skin cancer and is not recommended as a method for enhancing vitamin D status
HSE (I), (II)	The use of any ultraviolet (UV) tanning equipment (eg sunlamps, sunbeds and tanning booths) may expose staff and will expose customers to UV radiation. UV radiation can cause injuries and ill health either in the short term (eg sunburnt skin or conjunctivitis) or in the long term (eg. premature skin ageing, skin cancer and cataracts). Exposure to UV radiation tanning equipment before the age of 35 years significantly increases the risk of several types of skin cancer. Younger people seem to be more at risk from the cancer-causing effects of indoor tanning
The MET Office (I), (II), (III)	Avoid sun beds. The World Health Organization says that sunbeds are best avoided entirely as they cause damage to the skin and unprotected eyes

Table 8 Campaigns

	Campaigns
NHS CHOICES: SUN SAFETY (I), (II) &(III)	-
NHS CHOICES: SUNLIGHT & VITAMIN D	Healthy Start (includes vitamin D supplements)
SKCIN	5 S's SUN SAFETY SunSafe School and Nurseries/Workplaces George the SunSafe Superstar Golf club posters
BRITISH SKIN FOUNDATION	Recommendation 2 Information provision: developing national campaigns and local activities
NICE GUIDANCE: VITAMIN D	-
NICE GUIDANCE: SKIN CANCER	-
CONSENSUS VITAMIN D STATEMENT	-
CRUK-SUNSMART	The sun has got his hat on (Nivea Sun) 'Shadow rule'
BRITISH ASSOCIATION OF DERMATOLOGY (I) & (II)	World UV App
HSE (I), (II)	Keep your top on Sun protection. Advice for employers of outdoor workers

	Campaigns
The MET Office (I), (II), (III)	UV forecast Rainfall radar