

# Cancer Association of South Africa (CANSA)



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## Fact Sheet on Being SunSmart with Infants, Toddlers and Children

### Introduction

Just one blistering sunburn in childhood or adolescence more than doubles a person's chances of developing melanoma later in life. The sun exposure pattern believed to result in melanoma is that of brief, intense exposure - a blistering sunburn - rather than years of tanning. Some studies now indicate that basal cell carcinoma also may be triggered by this exposure pattern.

[Picture Credit: Sunburn]

Children should not be getting sunburned at any age, especially since there are a range of very effective sun protection methods that can be used. Parents and guardians need to be extra vigilant about sun protection for their infants and toddlers at all times. Many parents do not know the best ways to protect their young children from the harmful rays of the sun. (Skin Cancer Foundation).



### Sun Exposure Protection for Infants 0 to 6 Months

Infants under 6 months of age should be kept out of the sun. Special care should be taken from 10:00 until 15:00 when the Ultraviolet (UV) radiation of the sun is at its most intense.

If your baby is younger than 6 months, make sure to keep him or her out of direct sunlight. Protect the baby from sun exposure by dressing him or her in protective clothing, a hat with a brim and sunglasses. Make sure he or she does not get overheated, however.

Application of sunscreen for infants under the age of 6 months should be avoided. Sunscreens are recommended for children and adults. Babies' skin is less mature compared to that of older children and adults. Infants also have a higher surface-area to body-weight ratio compared to older children and adults. Both these factors mean that an infant's exposure to the chemicals in sunscreens may be much greater, increasing the risk of side effects from the sunscreen.

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Here are some things to keep in mind every summer when outside with infants:

- Keep the infant in the shade as much as possible.
- Consult a paediatrician before using a sunscreen on any infant. If it is absolutely necessary to apply a sunscreen, use only a small amount of sunscreen, and do not then assume that the infant is well protected.
- Make sure the infant wears clothing that covers and protects sensitive skin. Use common sense; if one holds the fabric against one's hand and it is so sheer that one can see through it, it probably does not offer enough protection.
- Make sure the infant wears a hat that provides sufficient shade at all times and provides protection for the whole face, ears and neck.



[Picture Credit: Well Protected Infant]

- Watch the infant carefully at all times to make sure he or she does not show any warning signs of sunburn or dehydration. These include fussiness, redness and excessive crying.
- Hydrate! Give the infant formula or breast milk if out in the sun for more than a few minutes. Do not forget to use a cooler to store the liquids.
- Take note of how much the infant is urinating. If it is less than usual, it may be a sign of dehydration, and that more fluids are needed until the urine flow is back to normal.
- Avoid combination sunscreens containing insect repellents like DEET. Young children and infants may lick their hands or put them in their mouths. Insect repellents should not, therefore, be used on infants.
- If it is noticed that an infant is becoming sunburned, get it out of the sun right away and apply cold compresses to the affected areas. Seek medical assistance if necessary or in doubt.

(US Food and Drug Administration; Mayo Clinic).

### **Sun Exposure Protection for Babies 6 to 12 Months**

Liberal amounts of sunscreen should be applied for babies of 6 months or older before they are allowed out in the sun for short periods of time. However, avoid exposing babies to the sun during peak hours - generally 10:00 to 15:00 - and dress the baby in protective clothing, a hat with a brim and sunglasses.



[Picture Credit: Children in the Sun]

Here are some aspects to keep in mind:

- When choosing a baby sunscreen, pick a broad-spectrum sunscreen with an SPF of at least 15.
- The American Academy of Dermatology recommends using a broad-spectrum sunscreen with an SPF of 30 or more.
- Apply sunscreen generously, and reapply every two hours - or more often if the baby is spending time in the water or perspiring.

- Apply the broad spectrum sunscreen at least 20-30 minutes before letting the child go into the sun.
- To avoid irritating the baby's skin and eyes, consider using a sunscreen that contains only inorganic filters, such as zinc oxide and titanium dioxide.
- Avoid using products that combine sunscreen and the insect repellent DEET, since sunscreen must be regularly reapplied and insect repellent typically does not need to be reapplied.
- Remember, just a few serious sunburns can increase a baby's risk of skin cancer later in life. Taking simple steps now can go a long way toward protecting the baby from the risks of sun exposure.
- Some babies may develop minor skin irritation in response to sunscreen use. True allergic contact dermatitis to the active chemicals in sunscreen is very rare, but may result from reactions to preservatives or perfumes in the product.
- Sunscreen milks or creams formulated for sensitive skin usually contain titanium dioxide or zinc oxide and are less likely to contain alcohol or fragrances that might irritate the skin.
- It is recommended to first test the sunscreen on a small area of the baby or toddler's skin to check for any skin reactions. As with all products, use of any sunscreen should cease immediately if any unusual reaction is observed.
- Babies with dark skin need sun exposure for longer periods and to more of their body to get adequate vitamin D. Whilst skin cancer, including melanoma, can occur in dark skin populations, the risk is lower. This is due largely to the higher concentrations of melanin naturally formed in this skin type which acts as a natural protection against UV radiation. There is currently no evidence that suggest sunscreen use on babies or children with naturally very dark skin (i.e. Type V and VI) further reduces their long term risk of developing skin cancer.
- Babies and children with naturally very dark skin should still protect their face and eyes from over exposure to UV exposure by wearing a brimmed hat, close fitting wrap-around sun glasses and using shade when it is available when UV levels are high.
- Children often copy those around them and learn by imitation. Research shows that if adults adopt sun protection behaviours, the children in their care are more likely to do the same

(Mayo Clinic; Cancer Council Australia).

### **Sun Exposure Protection for Toddlers and Pre-School Kids**

Plan daily activities to ensure that toddlers are well protected from the sun. Aim to minimise time (or take particular care) outside during the middle hours of the day during the summer period when UV levels are at their strongest. This is usually between 10:00 and 15:00.

[Picture Credit: Boy with Hat]



Make use of a combination of sun protection measures:

- Let the children put on clothing that covers as much of their skin as possible. Choose cool, loose fitting clothes and wraps made from densely woven fabrics. Some fabrics have an ultraviolet protection factor

(UPF) rating. The higher the UPF, the greater the protection provided by the fabric. If possible, choose fabrics that are at least UPF15 (good protection), but preferably UPF50 (excellent protection).

- Make use of a broad spectrum sunscreen with a sun protection factor (SPF) of 30 or above. When direct sun exposure is unavoidable, broad spectrum sunscreen (SPF30 or higher) may be applied to any small areas of skin that cannot be protected by clothing (such as the face, ears and backs of hands). Sunscreen should be applied 20–30 minutes before going outside and reapplied every two hours or more often if it has been wiped or washed off. It is best to first test the sunscreen on a small patch of skin to ensure there are no reactions. It must be remembered that sunscreen is the last line of protection.
- Get children to wear a broad-brimmed, bucket or legionnaire style hat so that the child's face, neck and ears are protected. Choose a fabric that will crumple easily when they put their head down. Consider the hat's size and comfort, the amount of shade it provides to the face, and if it will obstruct vision, hearing or safety. Hats that can be adjusted at the crown are best. If the hat is secured with a long strap and toggle, ensure it has a safety snap, place the strap at the back of the head or trim the length so it does not become a choking hazard.
- Teach children to seek shade as far as possible.
- Consider using a cover for the car windows. Clear auto glass (side windows) usually blocks almost all UVB radiation, but only 21% of UVA radiation.

[Picture Credit: Sunglasses]



- Provide kids with sunglasses, if practical, to protect their eyes. Look for sunglasses that are labelled at least UV400 and are a close fitting, wrap-around style that covers as much of the eye area as possible. Some infant sunglasses have soft elastic to keep them in place. Toy or fashion-labelled sunglasses do not meet the requirements for sunglasses and should not be used for sun protection.
- Check the children's clothing, hat and shade positioning regularly to ensure he/she continues to be well protected from ultraviolet radiation.

(Cancer Council Australia).

## Clothing Tips

Follow these guidelines:

- Choose clothing and baby wraps made from cool, densely-woven fabric that isn't too tight and still allows air flow.
- Tops with elbow-length sleeves, and if possible, collars and knee-length or longer style shorts and skirts are best.
- If a child is wearing a singlet top or dress, don't forget to cover up with a t-shirt or shirt before outdoor play.
- Layering clothing can help create more UV protection.

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- Darker colours generally offer more protection than lighter colours.
- Use rashies (also known as a rash guard) or t-shirts for outdoor swimming. If using a t-shirt, don't forget to change it when out of the water as dry t-shirts have a tighter fabric structure than wet ones.

(SunSmart).

### Sun Exposure Protection for School Kids and Adolescents

Every child should have access to proper sun protection at school.

The World Health Organization (WHO) notes that ultraviolet (UV) radiation exposure during the school years contributes significantly to total lifetime sun exposure.

During a child's typical weekday, six to nine hours are spent at school. Sunlight is most intense between 10:00 and 15:00, when students are often outdoors for recess and other school or after-school activities.

Many school grounds lack the adequately shaded areas needed to limit UV exposure.

During a typical school day, it is not unusual for children to receive a significant amount of sun exposure. Children in elementary school typically have outdoor recess between 10:00 and 14:00, a time when the sun is especially intense.

- Proper sun protection in childhood can drastically reduce the risk of developing skin cancer as an adult. Suffering just one blistering sunburn in childhood or adolescence more than doubles a person's risk of developing melanoma, the deadliest form of skin cancer, later in life.
- Regardless of age and skin colour, every child should be taught to adopt a complete sun protection regimen.
- Children's skins needs protection from the sun's harmful ultraviolet (UV) rays whenever they are outdoors.
- Seek shade. UV rays are strongest and most harmful during 10:00 and 15:00, so it is best to plan indoor activities for children during this time. If this is not possible, they should be taught to seek shade under a tree, an umbrella, or a pop-up tent.
- Children should cover up whenever they are in the sun. When possible, long-sleeved shirts and long pants and skirts can provide protection from UV rays. Clothes made from tightly woven fabric offer the best protection. A wet T-shirt offers much less UV protection than a dry one, and darker colours may offer more protection than lighter colours. Some clothing certified under international standards comes with information on its ultraviolet protection factor.
- Get a hat. Hats that shade the face, scalp, ears, and neck are easy to use and give great protection. Baseball caps are popular among kids, but they do not protect the ears and neck. If a child chooses a cap, be sure to protect exposed areas with sunscreen.
- Wear sunglasses. They protect the child's eyes from UV rays, which can lead to cataracts later in life. Look for sunglasses that wrap around and block as close to 100% of both UVA and UVB rays as possible.
- Apply sunscreen. Use sunscreen with at least SPF 15 and UVA and UVB protection every time before a child goes outside. For the best



protection, apply sunscreen generously 20 to 30 minutes before the child goes outdoors. Do not forget to protect ears, noses, lips, and the tops of feet.

- It must be kept in mind that sunscreen is not meant to allow children to spend more time in the sun than they would otherwise.

(Centers for Disease Control and Protection; Skin Cancer Foundation).

### Incidence of Skin Cancer in Infants, Toddlers and Children

According to the National Cancer Registry (2011) the following cases of skin cancer were diagnosed in infants, toddlers and children:

Type of Skin Cancer: 2011	All Boys 0 to 4 Years	All Boys 5 to 9 Years	All Boys 10 to 14 Years	All Boys 15 to 19 Years
Basal Cell Carcinoma	0	0	1	5
Squamous Cell Carcinoma	0	2	1	1
Malignant Melanoma	1	1	0	2

Type of Skin Cancer: 2011	All Girls 0 to 4 Years	All Girls 5 to 9 Years	All Girls 10 to 14 Years	All Girls 15 to 19 Years
Basal Cell Carcinoma	0	0	0	8
Squamous Cell Carcinoma	0	0	2	0
Malignant Melanoma	0	0	0	4

### Vitamin D and Calcium Requirements for Children

Calcium is an important nutrient for building bone and slowing the pace of bone loss. But it is not a single magic bullet, and some scientists suggest that too much calcium or dairy products may be unhealthy. Keep in mind that in addition to calcium, there are other nutrients and foods that help keep one's bones strong - most importantly vitamin D, but also vitamin K.

In building bone, calcium has an indispensable assistant: Vitamin D. This vitamin helps the body absorb calcium, and some research has shown that increasing vitamin D can help prevent osteoporosis and helps in lowering the risk for certain cancers.

A small and regulated amount of sun exposure can help one's body to manufacture its own vitamin D - about 5 to 15 minutes of sunlight between 10:00 and 15:00 twice a week to the face, arms, legs, or back without sunscreen will enable one to make enough of the vitamin. People with fair skin that burns easily should protect themselves from skin cancer by limiting sun exposure to 10 minutes or less.

Food and sun exposure should suffice, but if not, some experts advise getting 1,000 IU of vitamin D daily from a supplement.

(Harvard Medical School).

The new recommended daily amounts of Calcium and Vitamin D are as follows:

Life Stage Group	Calcium Recommended Dietary Allowance (mg/day)	Vitamin D Recommended Dietary Allowance (IU/day)
Infants 0 to 6 months	*	**
Infants 6 to 12 months	*	**
1 to 3 years old	700mg per day	**
4 to 8 years old	1 000mg per day	600 IU per day
9 to 13 years old	1 300mg per day	600 IU per day
14 to 18 years old	1 300mg per day	600 IU per day
14 to 18 years old, pregnant or lactating	1 300mg per day	600 IU per day

(NIH Medline Plus).

### Sunbeds and Their Dangers

Sunbeds give out ultraviolet (UV) rays that increase one's risk for developing skin cancer (both malignant melanoma as well as non-melanoma skin cancers). Most sunbeds also give out greater doses of UV rays than the midday sun.

The risks are greater for young people. Evidence shows that people who are frequently exposed to UV rays before 25 years of age are at a greater risk for developing skin cancer later in life

Sunbeds, sunlamps and tanning booths give out the same type of harmful UV rays as sunlight. UVA rays make up about 95% of sunlight. They can cause one's skin to age prematurely, making it look coarse, leathery and wrinkled. UVB rays make up about 5% and cause one's skin to burn.

[Picture Credit: Sunbed Skin]

A tan is one's body's attempt to protect itself from the damaging effect of UV rays. Using a sunbed to get a tan is not safer than tanning in the sun. It may even be more harmful depending on factors such as:

- The strength of UV rays from the sunbed
- How often one uses a sunbed
- The length of one's sunbed sessions
- One's skin type – for example, whether one has a fair or dark skin
- Age



Currently, there is no regulation that governs the type or strength of UV rays that sunbeds give out.

One cannot always see the damage that UV rays cause. The symptoms of skin damage can take up to 20 years to appear. UV rays can also damage one's eyes, causing problems such as irritation, conjunctivitis or cataracts, particularly if one does not wear sunglasses. (NHS).

CANSA has requested the Minister of Health to introduce Regulations to ban individuals under the age of 18 years to make use of sunbeds because of the known inherent ability of

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sunbeds to cause both melanoma and non-melanoma skin cancers. Various countries have already done so. CANSA is still awaiting positive reaction from the National Department of Health despite regular interaction with the Department.

According to the World Health Organization, sunbeds used in solariums, and sun tanning lamps, are artificial tanning devices that claim to offer an effective, quick and harmless alternative to natural sunlight. However, there is growing evidence that the ultraviolet (UV) radiation emitted by the lamps used in solariums may damage the skin and increase the risk of developing skin cancer.  
(World Health Organization)

### **Other Forms of Sunless Tanning**

Sunless tanning sprays deliver a faux glow by coating one's skin with the chemical dihydroxyacetone (DHA). DHA interacts with the dead surface cells in the epidermis to darken skin colour and simulate a tan, and the result usually lasts for several days.

[Picture Credit: Sunless Tanning]



DHA should not be inhaled, ingested, or exposed to areas covered by mucous membranes including the lips, nose, and areas in and around the eye (from the top of the cheek to above the eyebrow) because the risks are unknown.

Sunless tanning sprays create a false sense of security, making individuals believe that because their skin is a darker colour, they are protected against sunburn and will expose themselves to direct sunlight without sunscreen protection. Sunless tanning sprays and lotions do not contain a skin protecting sunscreen.

The risk of combining exposure to UV radiation from either the sun or indoor tanning devices followed by sunless tanning sprays (or vice versa) is unknown in humans.  
(US Food and Drug Administration).

Sunless tanning pills, which typically contain the colour additive canthaxanthin, are unsafe. When taken in large amounts, canthaxanthin can turn one's skin orange or brown and cause hives, liver damage and impaired vision.  
(Mayo Clinic).

Please refer to [CANSA's Fact Sheet and Position Statement on Sunless Tanning](#) for additional information on sunless tanning.

### **Medical Disclaimer**

This Fact Sheet is intended to provide general information only and, as such, should not be considered as a substitute for advice, medically or otherwise, covering any specific situation. Users should seek appropriate advice before taking or refraining from taking any action in

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### **Sunbed Skin**

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### **Sunglasses**

[https://www.google.co.za/search?q=wrap+around+sunglasses+children&source=lnms&tbm=isch&sa=X&ei=yu6zU7eDNOqv7AbC64HgDQ&ved=0CAYQ\\_AUoAQ&biw=1517&bih=666&dpr=0.9#facrc=\\_&imgdii=\\_&imgrc=GS63EKVrzYjH3M%253A%3BRpfAigZCf0\\_-EM%3Bhttp%253A%252F%252Fblog.realkidshades.com%252Ffiles%252F2011%252F12%252Fmfs\\_desc\\_pic1.jpg%3Bhttp%253A%252F%252Fblog.realkidshades.com%252Funcategorized%252Fhurray-it-is-vacation-week%252F%3B330%3B245](https://www.google.co.za/search?q=wrap+around+sunglasses+children&source=lnms&tbm=isch&sa=X&ei=yu6zU7eDNOqv7AbC64HgDQ&ved=0CAYQ_AUoAQ&biw=1517&bih=666&dpr=0.9#facrc=_&imgdii=_&imgrc=GS63EKVrzYjH3M%253A%3BRpfAigZCf0_-EM%3Bhttp%253A%252F%252Fblog.realkidshades.com%252Ffiles%252F2011%252F12%252Fmfs_desc_pic1.jpg%3Bhttp%253A%252F%252Fblog.realkidshades.com%252Funcategorized%252Fhurray-it-is-vacation-week%252F%3B330%3B245)

### **Sunless Tanning**

[https://www.google.co.za/search?q=dangers+of+tanning+spray&source=lnms&tbm=isch&sa=X&ei=1hK0U4Bwp5LsBoylgegH&ved=0CAYQ\\_AUoAQ&biw=1517&bih=714&dpr=0.9#facrc=\\_&imgdii=h7sunFJyNVvPDM%3A%3BXmLB5FqwritqHM%3Bh7sunFJyNVvPDM%3A&imgrc=h7sunFJyNVvPDM%253A%3B6wLWkJJwVuH4AM%3Bhttp%253A%252F%252Fmedia-cache-ec0.pinimg.com%252F236x%252Fe6%252F3c%252F69%252Fe63c691428bfaf730e1c5a6bc6355c88.jpg%3Bhttp%253A%252F%252Fwww.pinterest.com%252Fkaymeec%252Fendless-glow-airbrush-tan%252F%3B236%3B162](https://www.google.co.za/search?q=dangers+of+tanning+spray&source=lnms&tbm=isch&sa=X&ei=1hK0U4Bwp5LsBoylgegH&ved=0CAYQ_AUoAQ&biw=1517&bih=714&dpr=0.9#facrc=_&imgdii=h7sunFJyNVvPDM%3A%3BXmLB5FqwritqHM%3Bh7sunFJyNVvPDM%3A&imgrc=h7sunFJyNVvPDM%253A%3B6wLWkJJwVuH4AM%3Bhttp%253A%252F%252Fmedia-cache-ec0.pinimg.com%252F236x%252Fe6%252F3c%252F69%252Fe63c691428bfaf730e1c5a6bc6355c88.jpg%3Bhttp%253A%252F%252Fwww.pinterest.com%252Fkaymeec%252Fendless-glow-airbrush-tan%252F%3B236%3B162)

### **SunSmart**

<http://www.sunsmart.com.au/communities/parents>

### **US Food and Drug Administration**

<http://www.fda.gov/forconsumers/consumerupdates/ucm309136.htm>

[http://www.fda.gov/radiation-](http://www.fda.gov/radiation-EmittingProducts/RadiationEmittingProductsandProcedures/tanning/ucm116434.htm)

[EmittingProducts/RadiationEmittingProductsandProcedures/tanning/ucm116434.htm](http://www.fda.gov/radiation-EmittingProducts/RadiationEmittingProductsandProcedures/tanning/ucm116434.htm)

### **Well Protected Infant**

[https://www.google.co.za/search?q=infant+with+broad+brimmed+hat&source=lnms&tbm=isch&sa=X&ei=aeWzU8qwN6XC7Aap8YDoBQ&sqi=2&ved=0CAYQ\\_AUoAQ&biw=1517&bih=714&dpr=0.9#facrc=\\_&imgdii=\\_&imgrc=tZR9v\\_SRWApIsM%253A%3Be72nu9hD433mOM%3Bhttp%253A%252F%252Fmedia-cache-ec0.pinimg.com%252F736x%252Fba%252Fa2%252F10%252Fbaa2105644681f7cb352bede7600a026.jpg%3Bhttp%253A%252F%252Fwww.pinterest.com%252Fpin%252F389491067746347608%252F%3B570%3B763](https://www.google.co.za/search?q=infant+with+broad+brimmed+hat&source=lnms&tbm=isch&sa=X&ei=aeWzU8qwN6XC7Aap8YDoBQ&sqi=2&ved=0CAYQ_AUoAQ&biw=1517&bih=714&dpr=0.9#facrc=_&imgdii=_&imgrc=tZR9v_SRWApIsM%253A%3Be72nu9hD433mOM%3Bhttp%253A%252F%252Fmedia-cache-ec0.pinimg.com%252F736x%252Fba%252Fa2%252F10%252Fbaa2105644681f7cb352bede7600a026.jpg%3Bhttp%253A%252F%252Fwww.pinterest.com%252Fpin%252F389491067746347608%252F%3B570%3B763)

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Researched and Authored by Prof Michael C Herbst

[D Litt et Phil (Health Studies); D N Ed; M Art et Scien; B A Cur; Dip Occupational Health; Dip Genetic Counselling; Diagnostic Radiographer; Dip Audiometry and Noise Measurement]

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**World Health Organization**

<http://www.who.int/mediacentre/factsheets/fs287/en/>

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