

Should I worry about how much sun I get?

Level 3: Advanced

1 Warmer

a. In pairs or groups, answer these questions.

- What do you like to do on a sunny day?
- How do you protect your skin from the sun?
- How worried are you about the effects of the sun on your skin?

2 Key words

a. Fill the gaps in the sentences using these key words from the text.

cumulative	dermatologist	DNA	exposure	freckle
fundamental	hazard	immune system	inflammation	mutation
ozone layer	peaks	radiation	weave	wrinkle

1. The _____ is high above the earth's surface and protects it from the heat and harmful effects of the sun. Pollution has caused holes to form in it.
2. Something relating to the essential nature or character of something is _____.
3. _____ is the state of being put into a situation in which something harmful or dangerous might affect you.
4. A _____ is something that could be dangerous or could cause damage or accidents.
5. A doctor who treats people who have skin diseases is a _____.
6. Something that develops or increases gradually as a result of more and more being added is _____.
7. _____ stands for deoxyribonucleic acid, a chemical substance that contains genetic information and is found in all living cells and some viruses.
8. A _____ is a change in the genes of a plant or animal that causes it to become different from others of its type.
9. _____ is invisible energy that comes in waves from heat or light (e.g., microwave, ultraviolet, or electromagnetic).

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10. When something _____, it reaches the highest amount or level possible.
11. An area on your body with _____ is swollen, red and painful because of an infection or injury.
12. A line that appears on your skin when you get older or when your skin has been damaged by the sun is a _____.
13. The _____ is the system in your body that protects you against diseases.
14. A _____ is a small brown spot on your skin.
15. The _____ is how thread is made into a piece of cloth or the pattern formed in fabric by the thread.

b. Use some of the key words from the previous activity to complete these sentences. You may have to change the form of the word.

1. There are many creams and oils which say they are “anti-ageing” and can prevent _____.
2. If you have a problem with your skin, consider making an appointment with a _____.
3. _____ human rights include access to housing, education, safety, and clean water.
4. The red flag at the beach entrance means there are some _____ in the water today.
5. A tomato’s flavour _____ when it turns bright red.
6. If you have a strong _____, your body will be able to fight off diseases better.
7. Colour blindness is an example of a genetic _____ that can occur in humans.
8. Many companies will test your _____ and send you a report about your ancestry and health.
9. The _____ effects of eating lots of sugar and not exercising are an increased risk of diabetes.
10. _____ to cigarette smoke is harmful to humans and animals.

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Is slapping on the factor 50 enough to protect us from skin cancer? Are we safe indoors or on a cloudy day? Here's what the experts say

Joel Snape

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- 1 'I can't help myself; I'm in love with the summertime,' Divine Comedy lead singer Neil Hannon once sang – and though that feeling is shared by everyone who is enjoying a bank holiday, it's probably fair to say that sunny afternoons come with a bit of concern these days. We're all aware that we probably should be re-applying SPF 50 more often than we do, especially after swimming, but does the state of the ozone layer make things worse? Is the sun somehow ... hotter now?
- 2 "The most fundamental thing to understand is that sun exposure without the use of high-factor sunscreen or protective clothing is a health hazard," says Dr Derrick Phillips, consultant dermatologist and spokesperson for the British Skin Foundation. "Cumulative sun exposure over a lifetime damages skin proteins and cellular DNA, causing mutations and increasing the risk of developing skin cancers. Also, the skin becomes less effective at repairing damaged DNA over time. There is currently no way of reversing cumulative DNA damage, and so past sun exposure determines your present risk of skin cancer."
- 3 We're exposed to two forms of ultraviolet radiation from the sun: UVA and UVB. UVA can go through clouds and window glass, so it's still a concern if you're in the office or there's a brief break in the direct sun on a hot day. UVB peaks during the summer months and is especially dangerous when the sun is high in the sky around midday or in areas where the ozone layer is thin, like Australia. It can directly damage the DNA of skin cells, causing mutations and leading to cell death and inflammation.
- 4 UVA is present all year round, goes deeper into the skin and damages the proteins that keep it looking youthful. "UVA is responsible for 80% of the signs of skin ageing," says Phillips. That includes fine lines, wrinkles and colour changes. Both can cause cancer, but UVB is worse. Short exposure can cause mutations that lead to the development of melanoma, while long-term cumulative exposure is associated with other skin cancers that tend to occur later on in life.
- 5 Oh, and it's not just the cancerous effects you need to worry about. Scientists are starting to understand that too much UV exposure can lead to many other negative effects, including a weaker immune system.
- 6 So far, so depressing – and it's also worth noting that fair skin, red hair and freckles do increase how much you may be harmed by the sun's radiation, as does a family history of skin cancer. So what's the solution? "Sunscreen protects the skin from the harmful effects of UV radiation," says Phillips. "It should really be applied to exposed sites all year round, but particularly during the summer months and on sunny holidays. Studies have shown that most people do not apply enough sunscreen to get the level of protection on the label. To keep your family safe, we recommend using sunscreen with at least SPF30 and five-star UVA protection. It should be applied every two hours and more frequently if you are swimming or doing any activities that will cause you to sweat." In other words, follow the instructions on the bottle, and do it before you go out, as it can take 15 minutes to be absorbed into the skin.
- 7 If you're relying on your clothes to protect you, consider what you're wearing: tight weaves offer much better protection than loose weaves do. An average cotton shirt actually provides poor protection – with an ultraviolet protection factor (UPF) level of about 5 – as compared with sun-protective clothing that can offer more protection, from UPF 30 to 50+. Long-sleeved, loose-fitting clothes with a high neck are a good idea, as are a broad-brimmed UPF-rated hat and sunglasses. The Skin Cancer Foundation advises that brighter and darker-coloured clothes offer better protection as they prevent more rays from getting to you. If you're caught without your factor 50 in the beer garden, consider having a fruity drink instead: one small study suggests that alcohol increases the risk of sunburn while vitamins C and E together seem to offer slight protection from it.

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- 8 Finally, there really is one good reason to pack a good old-fashioned book in your suitcase, rather than bringing a tablet to read on holiday: the latter can reflect the sun's UV rays back into you, giving you a higher dose than normal. Oh, and you probably shouldn't be going to tanning salons under any circumstances. But the Divine Comedy never wrote a song about those anyway.

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3 Comprehension check

a. Answer the questions using information from the article.

1. Why is it dangerous to stay in the sun without sunscreen or protective clothing?
2. What is the difference between the two types of radiation from the sun?
3. Which type of radiation is responsible for 80% of the signs of ageing?
4. Which type of radiation is more likely to cause cancer?
5. What physical and genetic factors can increase how much you may be harmed by the sun?
6. What can protect people from UV radiation?
7. How frequently should you reapply sunscreen?
8. What kinds of clothing give the best protection against UV?
9. How does alcohol affect your risk of sunburn?
10. Which vitamins may help protect the skin from sunburn?

4 Key language

a. Match each adjective to its meaning.

- | | |
|------------------|---|
| 1. high-factor | a. top quality |
| 2. long-term | b. clothing which is comfortable and not tight |
| 3. five-star | c. something from the past that still exists today |
| 4. long-sleeved | d. a hat with a wide edge to protect the face and neck well |
| 5. loose-fitting | e. continuing to exist or have an effect for a long time in the future |
| 6. broad-brimmed | f. used with UPF clothing to refer to the degree of protection it gives |
| 7. old-fashioned | g. covering your arms to the wrist |

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b. Complete the sentences using the adjectives above.

1. Getting a reservation at that _____ restaurant is impossible!
2. She likes _____ furniture, so she shops at antique shops.
3. I always wear a _____ hat when I'm gardening or at the beach.
4. Are wide, _____ trousers back in style?
5. All the children wore _____ swim shirts with UPF 50 at the pool.
6. If you visit the Everglades National Park in Florida, wear a _____ shirt and pants to protect yourself from mosquitos and other bugs.
7. Is this flat available for a _____ rental, or only for short-term holiday rentals?

c. Choose four of the adjectives above and write personalised sentences using them.

5 Discussion

a. Discuss these statements.

- "Some sunscreens are more dangerous than UV exposure from the sun."
- "Fine lines, wrinkles, and colour changes in the skin are a normal part of ageing."
- "Everyone should limit their sun exposure and wear protective clothing at all times."

6 In your own words

a. Use an internet search engine to find more information about the effects of UVA and UVB exposure.

- How does the sun damage the skin?
- What are some risk factors for skin cancer?
- Are there any benefits to limiting sun exposure?
- What are some other preventative actions people can take?

b. Report your findings to the class and share your opinion about the issue.