

1. Describe the pictures.
2. What physical function does the skin perform?



**1. Complete the correct preposition:**

1. Skin is structurally distinct \_\_\_\_\_ mucous membranes.
2. Hair follicles are lined \_\_\_\_\_ cells that synthesise the proteins that form hair.
3. Eccrine glands are linked \_\_\_\_\_ the sympathetic nervous system.
4. Hair, horns and nails are derived \_\_\_\_\_ skin.
5. Nails consist \_\_\_\_\_ keratinized epidermal cells.
6. The primary function of skin is to serve \_\_\_\_\_ a barrier.
7. Skin damaged \_\_\_\_\_ burns is less effective \_\_\_\_\_ preventing fluid loss, often resulting \_\_\_\_\_ a possibly life threatening problem if not treated.

**2. Fill in the word in brackets in the appropriate form.**

1. Genetics controls some features of hair: \_\_\_\_\_ /bald/ and texture.
2. Nail bed is \_\_\_\_\_ /thick/ to form a lunula.
3. Skin functions include \_\_\_\_\_ /protect/, \_\_\_\_\_ /regulate/ of body temperature and \_\_\_\_\_ /sense/ reception.
4. Skin prevents water and extracellular fluid \_\_\_\_\_ /lose/.
5. Melanocytes protect from the \_\_\_\_\_ /damage/ effects of ultraviolet radiation.
6. When a microbe penetrates the skin the \_\_\_\_\_ /inflammation/ response occurs.
7. Water can be lost due to \_\_\_\_\_ /evaporate/.
8. The hypothalamus also causes \_\_\_\_\_ /dilate/ of the blood vessels of the skin.

**1) Make question so that the underlined word is the answer.**

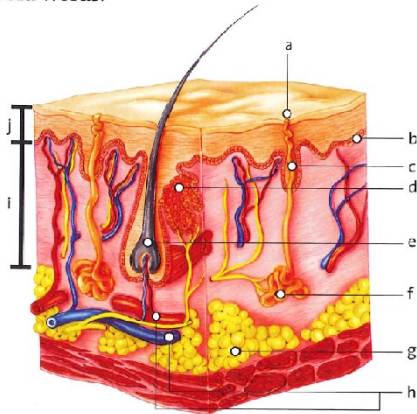
Yes, I have been working hard.  
 The film begins at 8 o'clock.  
Something terrible happened to me last night.  
10 people came to the meeting.  
 I want to speak to the doctor.  
 Ann has applied for the job at Mercy's hospital.

**2) Use the cues to make questions**

- a. Have fall over?
- b. you hurt?
- c. What think the problem?
- d. Who around when pain set in?
- e. Could describe what happen me?
- f. How long have chest pain? (looking at the patient holding his chest)
- g. There any other things like to talk about?
- h. What else you concern about?
- i. The phlegm colour?

## The skin

Read the text and label the diagram with the **bold** words.



The thin outer layer of the skin is the **epidermis**, which is made of tough, flat cells. Dead cells at the surface form a scaly protective layer, and as these are lost, new skin cells are forming in the **basal cell layer** at the bottom of the epidermis. Also in this bottom layer are melanocytes, which produce the hormone melanin, which gives the skin its colour and protects it from UV light.

The skin's inner layer, the **dermis**, is made of strong, elastic tissue. It contains nerve endings and small **blood vessels**.

**Sebaceous glands** produce sebum, an oil that rises to the surface of your epidermis to keep your skin lubricated and waterproof.

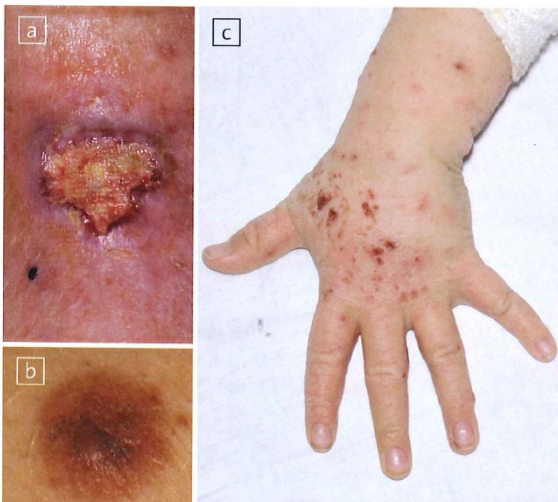
Sweat is produced in **sweat glands**, and comes up through **sweat ducts** to the surface of the skin from where it comes out through tiny **pores**. Body hairs grow in **follicles** in the dermis.

Under the skin is a layer of **subcutaneous fat**. This keeps the body warm, absorbs shocks, and helps hold your skin to all the tissues underneath it.

### Skin conditions

1 Work in pairs. Look at these pictures of skin conditions and discuss what you know about them.

- 1 What is each of the conditions called in your language?
- 2 What are the possible causes of each one or the risk factors for developing them?



## Phrasal verbs

1 Read this letter to a magazine. Work with a partner and write three pieces of advice for the letter-writer.

I've had acne since I was thirteen. Sometimes it's better and sometimes worse, but it never goes away completely. I know that the next time I need to look my best I'll **break out** in nasty spots. I've tried out every product on the market, but they've all just been a waste of money. Is there a natural way to **deal with** acne?

2 Read the reply. Is any of the advice the same as yours?

Acne happens when excess sebum – the skin's natural oil – blocks your pores. As skin cells **die off**, they also clog the pores, allowing bacteria to **build up**. This forms an open 'blackhead', or a covered 'whitehead'.

As far as food goes, you don't need to **cut out** fat from your diet altogether, but if you can **cut down on** deep-fried food, it should help.

Wash your face gently twice daily with a mild soap, taking care to **rinse it off**. If you wear make-up, make sure you **take it off** completely at night. And don't squeeze spots! If you burst a pimple, it may **turn into** a deep and painful cyst.

3 Match the **bold** verbs in the text with these meanings.

- 1 to take action to solve a problem **deal with**
- 2 to collect in a place \_\_\_\_\_
- 3 to suddenly have marks, spots, etc. cover an area of skin \_\_\_\_\_
- 4 to eat or do less of something \_\_\_\_\_
- 5 to remove something that you are wearing \_\_\_\_\_
- 6 to remove something using clean water \_\_\_\_\_
- 7 to stop eating or doing something \_\_\_\_\_
- 8 to die, one by one \_\_\_\_\_
- 9 to become something different \_\_\_\_\_

2 Which condition(s) in 1 would you expect these adjectives to be used for? Write *a*, *b*, or *c*. Use your dictionary to help you.

- |                  |                   |
|------------------|-------------------|
| 1 inflamed _____ | 5 irregular _____ |
| 2 sore _____     | 6 crusty _____    |
| 3 flaky _____    | 7 itchy _____     |
| 4 cracked _____  | 8 scaly _____     |

3 Listen to dialogues a–c and check which dialogue the adjectives are used in.

4 Listen again and tick (✓) the items on the list that are mentioned.

#### Dialogue a

- |  |                                   |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> sitting down | <input type="checkbox"/> exercise |
| <input type="checkbox"/> bandage                 | <input type="checkbox"/> sleep    |
| <input type="checkbox"/> compression stockings   |                                   |

#### Dialogue b

- |                                     |                                 |
|-------------------------------------|---------------------------------|
| <input type="checkbox"/> blood test | <input type="checkbox"/> biopsy |
|-------------------------------------|---------------------------------|

#### Dialogue c

- |   |                                      |
|---|--------------------------------------|
| <input type="checkbox"/> food               | <input type="checkbox"/> sweat       |
| <input type="checkbox"/> baths              | <input type="checkbox"/> fingernails |
| <input type="checkbox"/> moisturizing cream | <input type="checkbox"/> clothes     |



## Reading

### Treating burns

- 1 Have you ever worked with patients with severe burns? Talk about the experience.
- 2 Read the texts and write the letter of a treatment (A–E) next to each description. Which treatment
  - 1 reduces tissue damage by increasing blood flow to the burn? \_\_\_\_\_
  - 2 involves spraying skin cells on to a burn? \_\_\_\_\_
  - 3 shows images of cold weather to distract the patient from pain? \_\_\_\_\_
  - 4 prevents the formation of raised scars? \_\_\_\_\_
  - 5 uses a dressing coated with metal? \_\_\_\_\_

- 6 reduces scarring by getting new skin to grow quickly? \_\_\_\_\_
- 7 requires regular wetting? \_\_\_\_\_
- 8 involves wearing a device shaped to fit your face? \_\_\_\_\_
- 9 produces new skin that does not shrink? \_\_\_\_\_
- 10 allows fewer pain signals to reach the brain? \_\_\_\_\_

- 3 Imagine you are judging these five treatments in a competition for the most imaginative technology. Give each one a mark from 1 (minimum) to 5 (maximum). Then form small groups and explain your decisions.

- A \_\_\_\_\_ D \_\_\_\_\_  
 B \_\_\_\_\_ E \_\_\_\_\_  
 C \_\_\_\_\_

## CUTTING-EDGE TREATMENTS FOR BURNS

**A** Laser technology has been developed to produce an exact image of the shape of the face quickly and easily. This is then made into a transparent mask, which keeps the skin flat and prevents raised scars from forming. The tight-fitting mask, which greatly reduces disfigurement, is worn for 23 hours a day for a year or more.



**B** During daily wound cleaning, burn survivors experience excruciating pain and often relive the trauma of the fire. A software company has developed a virtual reality movie called *Snow World*, where the viewer is flying through snowy landscapes

and frozen water. Patients report large drops in pain while watching. MRI scans suggest that fewer signals actually reach the brain while the patient is involved in the movie.



**C** A doctor in California discovered that the drug Heparin, when applied on to and underneath a burn, keeps blood flow to the burn high. This stops the damaged area from spreading and reduces pain. The new skin that grows is close to the original skin in colour and texture, and also does not contract – usually a great problem with burns. Added to this are the benefits of less surgery, shorter hospitalization, and the need for less medication.

**D** Australian researchers have pioneered a technique for culturing small samples of the patient's skin in the laboratory and

spraying them on to burns. Here they continue their growth and are added little by little until the area is completely and smoothly covered. Previous techniques involving cultured skin took around three weeks to cover a major burn, whereas this technique takes just five days, greatly reducing scarring.



**E** A new technique for treating burns has been developed in Australia that reduces the number of painful skin grafts by half. The treatment involves a silver-coated dressing, which helps prevent infections. The bandage needs changing less frequently, which means the patient suffers less pain, and the nurses have more time. A system of tubes allows the patient to keep the dressing moist at home, without the need for a nurse.