**Hair and Beauty - Dermatitis**

# 1 of 18 – Welcome

Welcome to this session on dermatitis

In this session we will be covering

* Signs
* Symptoms
* Causes

# 2 of 18 - What is an occupational disease

Hairdressers are particularly at high risk when it comes to skin problems. Up to 70 per cent of hairdressers will suffer a form of skin damage at some stage in their career. Bear in mind that skin damage is not only painful, it also looks unsightly. It can ruin a hairdresser’s or barber’s career

The statistics say that you are very likely to develop some form of dermatitis

The skin plays a very important role as a barrier to chemicals and other contaminants entering the body, but skin disorders may disrupt this protective function

**Dermatitis – an occupational disease that won’t go away!**

# 3 of 18 – What is causes occupational skin disease

Occupational skin diseases are caused by direct contact with one or more hazardous substances.   
The skin can come into contact with substances through:

* Immersion
* Contact with contaminated tools or surfaces, for example a workbench, tools or clothing
* Splashing
* The substance landing on the skin

# 4 of 18 – Understanding the causes of skin disease

The skin is a complex active organ, if any of its functions fail there can be serious consequences. The skin’s ability to act as a barrier is particularly important for occupational health.

**“One way to understand the barrier function of the stratum corneum is to consider it as a brick wall.”**

The corneocytes (made of tough protein) form the ***bricks*** and between these a double layer of lipids (fatty materials) and water make up the ***mortar***. Some lipids have a hard crystal-like structure and are impermeable to water.

Others lipids do not have this structure and they allow water to percolate through. So, the barrier is semi-permeable.

# 5 of 18 – Understanding the causes of skin disease

The elasticity, firmness and correct functioning of the stratum corneum depends on its moisture content. Retention of water is aided by substances in the skin called **natural moisturising factors** (NMFs). If the moisture content is too high or too low, it can affect the skin’s barrier properties.

**If the skin becomes overhydrated, for example from prolonged contact with water or from wearing gloves that prevent sweat from evaporating, it causes NMF production to stop!**

If the skin dehydrates, for example in an air-conditioned environment with low humidity, the corneocytes are not shed as normal and the skin becomes rough, thickened and flaky, eventually leading to cracking because of loss of elasticity.

# 6 of 18 – Understanding the causes of skin diseases

The ‘*surface film’* (**acid mantle** ) on the epidermis also acts as a barrier, to prevent bacteria and other contaminants from penetrating the skin. The film is slightly acidic, and can help to neutralise the contaminants that are typically alkaline in nature. Excessive use of harsh alkaline soaps can destroy the acidity of the film and hence the protection it offers. **when the skin’s barrier is breached**

This happens when:

* a material/agent penetrates the barrier layer, or alters it so other materials/agents can penetrate it
* a material/agent enters sweat ducts or hair follicles, by-passing the barrier layer.

(where the term material/agent is used above, think of this as a contaminant)

# 7 of 18 – How does the skin react to ‘breaches’?

The skin has a limited range of protective responses. The most common one is **inflammation**. This is known as **dermatitis** or **eczema**.

**The initial symptoms are:**

* Redness and heat from dilation of local blood vessels
* Swelling and blistering from plasma leaking from the vessels to the surrounding tissue
* Irritation - itching caused by stimulation of nerve fibres

**Secondary changes due to infection and scratching include:**

* Crusting
* Ulcers
* Thickening of the skin

# 8 of 18 – Dermatitis video

**Watch the video to find out more about this occupational disease:**

<https://www.youtube.com/embed/YYKBFO6cp4w/autoplay=1&rel=0&start=0&modestbranding=1&showinfo=0&theme=light&fs=0&probably_logged_in=0>

# 9 of 18 – Dermatitis

There are two main types of work-related contact dermatitis:

* Irritant contact dermatitis
* Allergic contact dermatitis

**Irritant contact dermatitis -** An irritant directly damages cells :

* If in contact with the skin
* If in sufficient concentration/strength
* If it has sufficient time

Most irritants cause dermatitis by gradually overwhelming the skin’s barrier and repair mechanisms.   
Mild irritants such as detergents (as found in shampoos and cleaning products) will wash out the stratum corneum lipids, and if exposure exceeds the capacity of the skin to regenerate those lipids, **dermatitis will result**.   
**In general, irritant contact dermatitis is more common occupationally than allergic contact dermatitis.**

**Allergic contact dermatitis**

Allergic contact dermatitis is caused by contact with a sensitiser (**allergen**) which causes a ‘delayed hypersensitivity’ reaction. (A sensitiser is a substance that can induce an ‘over-reaction’ of the body’s immune system.)

Once sensitisation has occurred, subsequent contact causes T-cells to recognise the sensitiser and multiply. This induces the release of substances such as histamine that bring about inflammation. This second phase can happen hours, or days, following contact hence its name ‘delayed hypersensitivity’.

* Very small quantities of the sensitiser can trigger a response once sensitised
* Sensitisation is specific to one substance or to a group of substances that are chemically similar.

**Once sensitised, a person is likely to remain so for life!**

# 10 of 18 – How to prevent dermatitis

**How to prevent dermatitis**

Here's how to wave goodbye to bad hand days. Five small steps to prevent dermatitis becoming a big problem:

**Step 1** - Wear disposable non-latex gloves when rinsing, shampooing, colouring, bleaching, etc.

**Step 2** - Dry your hands thoroughly with a soft cotton or paper towel.

**Step 3** - Moisturise after washing your hands, as well as at the start and end of each day. It's easy to miss fingertips, finger webs and wrists.

**Step 4** - Change gloves between clients. Make sure you don't contaminate your hands when you take them off.

**Step 5** – Check your skin regularly for early signs of dermatitis.

# 11 of 18 – Question 1

Hairdressers are at a particularly high risk when it comes to skin problems. What percentage of hairdressers suffer from skin damage during their career?

* 40%
* 50%
* 60%
* 70%

The correct answer is **70%**

# 12 of 18 – Question 2

What is an occupational skin disease?

* Something caused by a person's work activity
* Something caused by a person's social activity
* Something caused by viral infection
* Something caused by bacterial infection

The correct answer is **something caused by a person's work activity**

# 13 of 18 – Question 3

Occupational diseases are caused by direct contact with hazardous substances. By what methods can skin develop an occupational disease?

* immersion in liquids
* splashing on the skin
* contact with contaminated surfaces
* all of the above

The correct answer is **all of the above**

# 14 of 18 – Question 4

Skin acts as a barrier to contaminated foods?

* True
* False

The correct answer is **True but its ability is impaired when a sensitivity develops**

# 15 of 18 – Question 5

Irritant contact dermatitis is more common occupationally than allergic contact dermatitis?

* True
* False

The correct answer is **true**

# 16 of 18 – Question 6

What is the **most** common protective response of skin; as a visual reaction?

* Crusting
* Inflammation
* Itching
* Irritation

The correct answer is **inflammation**

# 17 of 18 – Question 7

* Which of the following are initial signs of skin sensitivity?
* Crusting
* Redness
* Swelling
* Irritation
* Ulcers

The correct answers are **redness, swelling and irritation**

# 18 of 18 – End

You have now completed this session on the different types of dermatitis. You will now be able to recognise the:

* Signs
* Symptoms
* Causes

If you are unsure or have any questions about any of these topics, make a note and speak to your tutor for more help.