What are freckles and skin moles?

Freckles are small usually pale brown areas of skin, which are often temporary and are usually caused by exposure to the sun.

Moles are areas of darker pigmented (brown or brown/black) on the skin, they are long-lasting and are only indirectly associated with exposure to the sun.

Both freckles and moles are very common in all peoples of the world but they are more obvious in people who have lighter coloured skin. There are rare types of freckles (usually clustered around the mouth) that are part of a genetic syndrome called Peutz Jegher's Syndrome. These are quite easy for a doctor or dentist to diagnose in a person or family.

Why do we have pigment in our skin?

The colouration in our skin (partially) protects us from ultraviolet (UV) light in the sun. Some people have dark skin all the time and others only when they are exposed to UV light (tanning). Even people with normally dark skin usually go darker in the sun.

What causes pigmentation of the skin?

Skin is a particular colour because of the production of types of melanin by a specialised skin cell called the melanocyte. If these are infrequent, evenly spaced and produce low levels of melanin you will have pale skin. If you have more of the cells and they produce higher amounts of melanin you will have darker (or even black) skin. If the melanocytes cluster together and produce melanin, you can develop freckles or moles, which depends on how many of the cells are clustered and how much melanin they make.

What causes skin moles and are they 'normal'?

Moles are very common and therefore 'normal' for most people: the average adult has between ten to forty at any time. Moles are collections of melanocytes that are producing melanin to give a concentrated 'patch' of colour in the skin.
Some people are born with a few or many moles and some families have more moles than others. We think others develop moles as a response to sun exposure. The type of moles that doctors are most interested in are those that can become a type of skin cancer (melanoma).

You can have any number of moles, and most never become cancerous.

**How common are unusual/atypical moles?**

Moles that are considered unusual or 'atypical' occur in around 10% of the population. Only one in ten thousand of these people will have a malignant (cancerous) mole.

**Do moles last for ever?**

Some moles do last for your lifetime, others come and go but usually over years.

Quite often a mole begins as a small, flat spot and over time, becomes raised. It might then flatten again, become paler and even disappear altogether.

Some moles develop and change their appearance quickly - these are the ones to be most concerned about.

**How can I keep an eye on my moles?**

Doctors encourage people to be aware of what is 'normal for me' and to look out for changes in the appearance and feel of their bodies. This is also true for your moles.

When you wash in the bath or shower, you will become aware of where your moles are and what they look like; if one or more changes its appearance towards a suspicious mole (see below), let your general practitioner (GP) know.

**What changes in moles can mean they need medical attention?**

Doctors encourage people to keep an eye on their moles and ask them for advice when a mole:

- Changes shape: especially if it has irregular edges
- Changes size: especially if it gets larger
- Bleeds easily

If you find a mole that has any of these changes, do go to see your general practitioner soon. They will be able to check it out for you and refer you to a dermatologist or oral and maxillofacial surgeon (if it is on your head, neck, face or is in your mouth).
If my moles change appearance does it mean I have cancer?

Moles commonly change appearance and most of these changes will not be cancers (see above). It is best for your health to know so you either won't worry unnecessarily or might catch an early cancer when it can be successfully and easily treated.

How can doctors tell if a mole is a cancer or just atypical?

Patients are good at detecting changes in their visible moles. Doctors are good at telling which moles are probably normal and which look as if they might be atypical or unusual (or even cancers).

To tell if a mole is an early cancer, the doctor will usually need to look at some cells from the mole under a microscope. These cells are obtained after a biopsy, which (depending on the size and location of the mole) usually removes part or the whole of the mole and/or a little tissue around it.

Some specialist clinics (eg at Addenbrooke's Dermatology) have equipment that detects the most atypical (suspicious) moles without the need for biopsy.

How are moles removed?

If a biopsy of a mole indicates the presence of atypical or already cancerous cells, removal of the mole will probably be recommended. The removal of the mole usually includes the removal of a normal margin of tissue around the mole. This is to ensure that no cancer cells remain around the site of the mole.

There are different techniques for mole removal according to where they are on your body. Those on the face are treated very carefully to minimise any scarring.

Your doctor will carefully explain what is involved for you and support you throughout the process.

Can I have moles removed within the NHS?

Your general practitioner is the best person to advise you about the removal of moles within the NHS. For example, it might not be a health priority of the NHS for moles to be removed for purely cosmetic reasons.

If the mole seems suspicious to them, it will be a priority to know if it is a skin cancer and they will advise you of how to proceed.