

Acne

Acne is one of the most common skin complaints, suffered by more than 80 per cent of people at some stage, but particularly during pubescent years. Up to 14 per cent of those people consult their GP and 0.3 per cent see a dermatologist. Acne is easily recognisable by red spots and/or blackheads or whiteheads, particularly on the face. The effects can range from mild to severe, with the worst cases causing serious long term-effects such as scarring and psychological problems, as well as possible suicidal tendencies.

Acne is caused by infected plugged hair follicles. Just under the skin sit tiny sebaceous glands attached to hair follicles. The glands produce sebum to lubricate the hair and the skin to stop them drying. However, in acne, they produce too much sebum. At the same time, the skin sheds dead skin cells, which mix with the excess sebum to form a plug in the follicle. These can then produce either a whitehead, if close to the skin surface, or a blackhead, if the follicle is open to the skin.

The bacteria found on skin are normally harmless, but if they become contaminated, they infect the plugged follicles, resulting in red or pus-filled spots.

There are six main types of spot caused by acne and severity is normally classified as mild, moderate or severe. Blackheads, whiteheads and smaller pimples are termed mild to moderate, with larger spots and inflammation moderate to severe.

- **Blackheads:** small black or yellowish bumps that develop on the skin
- **Whiteheads:** a similar appearance to blackheads but they can be firmer and have a white centre
- **Papules:** small red bumps that may feel tender or sore
- **Pustules:** similar to papules but they have a white tip in the centre that is caused by a build-up of pus
- **Nodules:** large hard lumps that build up beneath the surface of the skin and are usually painful
- **Cysts:** the most serious type of spot. Large, pus-filled lumps that look similar to boils, cysts carry the greatest risk of causing scarring.

CAUSES

Teenagers have the highest occurrence of acne due to puberty, which triggers an increased level of the hormone testosterone in both males and females. For males, it is the important stimulant for growth of

the reproductive tissues and for muscle and bone density, while for females it acts as a preventative for osteoporosis. Testosterone increases the normal level of sebum required to maintain the skin and is therefore thought to be one of the main causes of acne in teenagers.

In adults, there are a number of reasons acne occurs. For women, the most common are hormonal changes during the menstrual cycle, with the sebaceous glands being particularly sensitive to changes in hormone levels and also during pregnancy. Acne can also be hereditary. More rarer causes can be attributed to conditions such as polycystic ovary syndrome, some progesterone-based contraceptives, cosmetic products which are particularly greasy and treatments used for skin conditions such as eczema. Other more basic causes can be poor dietary habits and psychological problems such as stress and depression.

MYTHS

- **Diet** – it has been believed that a diet full of chocolate, cakes, sweets or fatty foods caused acne. There is no medical evidence that eating any of these either causes acne or makes it worse
- **Water** – drinking lots of water will not cure acne
- **Hygiene** – a popular misconception is that acne is caused by unclean skin and poor hygiene. It is important to keep the skin clean to prevent infection, but over-cleaning can damage and stress the skin, making it worse
- **Stress** – is not a deciding factor for acne but it does appear that people under stress can be prone to outbreaks
- **Sex** – a very old myth that as soon as a sufferers become sexually active, their skin condition will clear
- **Sun** – there is no evidence to prove that sunbathing or sun beds will improve acne. Many acne treatments can sensitise the skin, making it riskier to be in the sun

SPENDING BY CORPORATION

Corporations	Spending (\$K)	%	% change
Galderma	171,018	36.5	17.3
GlaxoSmithKline	50,602	10.8	19.5
Medicis	33,525	7.2	-35.5
Bayer	31,685	6.8	7.7
Sanofi	20,988	4.5	-45.6
Valeant	19,507	4.2	-7.1
Johnson&Johnson	18,108	3.9	-18.7
Otsuka Pharma	13,999	3.0	48.7
Allergan	10,269	2.2	-31.7
Sato Seiyaku	8,296	1.8	38.3

SPENDING BY PRODUCT

Brands	Spending (\$K)	%	% change
Epiduo	90,812	19.4	22.5
Differin	69,871	14.9	12.9
Duac	32,494	6.9	-4.8
Benzaclin	19,881	4.2	-47.6
Solodyn	17,535	3.7	-43.1
Skinoren	14,198	3.0	1.7
Acuatim	13,989	3.0	48.6
Retin A	13,951	3.0	-17.5
Diane	13,330	2.8	7.7
Acanya	12,049	2.6	-1.6

- **Removing black- and whiteheads improves acne** – is untrue and causes more harm by either scarring the skin or causing further spread of infection
- **Contagious** – acne cannot be caught.

There are three major issues with acne. First, the scarring that it can leave behind on the skin; second, hyperpigmentation, where the skin tone darkens where the acne was and third, the psychological problems that can occur during and after.

Scarring generally forms after the more severe type and up to a fifth of people with acne have scarring that is noticeable.

There are three main types of acne scar:

- **Ice-pick scars** – caused by picking or squeezing the spot and are small, deep holes
- **Rolling scars** – formed by bands of scar tissue under the skin, which give it an uneven appearance
- **Boxcar scars** – large craters and depressions in the skin.

Teenagers are particularly sensitive about their appearance and suffering from severe acne can be socially debilitating. It can stop them developing both their character and normal relationships and, consequently, they may shut themselves away. If left unchecked, these patterns of behaviour can become serious and develop into adult life, possibly leading to depression.

HISTORIC TREATMENT

Acne has been a problem for thousands of years. The Egyptian pharaohs are known to have suffered and their cures were often based around magic spells and charms. Similarly in ancient Greece, acne was well-known. It was not until the Roman Empire that the first recognised treatment for acne was noted. By mixing sulphur in mineral baths it was thought that the pores could be unclogged and cleansed. It was fairly effective, as it reduced the amount of bacteria that caused acne.

Moving to the nineteenth century, studies by Dr William H Schuessler,

a German biochemist, revealed that every human has 12 mineral compounds known as biochemical tissue salts (cell salts). He concluded that any deficiencies or imbalance of these minerals in the body resulted in illness affecting those particular tissues, including acne. Therefore, the solution lay in restoring balance. This method of treatment is still the foundation for many homoeopathic treatments today.

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It was not until the 1930s, when a scientist at Revlon, Jack Breitbart, developed benzoyl peroxide, that the world of acne treatments changed forever. Benzoyl peroxide dries and clears the skin and pores which, in turn, shrinks or reduces acne. It is still used today as a basis for many over-the-counter products for mild to moderate acne. In the 1950s, mild antibiotics, such as tetracycline, began to be prescribed and, in the 1960s, Retin A was developed, which is still used today.

SEVERE ACNE DRUG

Now, there is a whole host of drugs, including the contraceptive pill and many herbal remedies, but one that has courted particular attention is isotretinoin (Roaccutane and Accutane), which is prescribed only for severe acne. It cannot be prescribed by a GP and can only be obtained via a dermatologist. Treatment with this drug has had a high success rate. Isotretinoin works by reducing the production of sebum, preventing dead skin cells from plugging hair follicles and reducing inflammation. It is taken in a pill form and is normally prescribed for a period of four-to-six months. However, if taken by a pregnant woman, it may cause serious birth defects and it has an array of uncomfortable side effects, the most controversial of which is that it may contribute towards suicidal tendencies.

A study conducted in Sweden between 1980 and 2001 by Dr Anders Sundstrom attempted to assess the risk of attempted suicide before, during and after treatment with isotretinoin for severe acne. Of the 5,756 participants, 128 were admitted to hospital for attempting suicide. Sundstrom and his colleagues believed it was impossible to say for certain that the continued rise in suicide risk was ‘due to the natural course of severe acne or to negative effects of the treatment’. They acknowledged that the increased risk could be ‘as a consequence of exposure to the drug’ but believed ‘a more probable interpretation is that the underlying severe acne may best explain the raised risk’ (*British Medical Journal* 2010; 341:c5812).

SCAR TREATMENTS

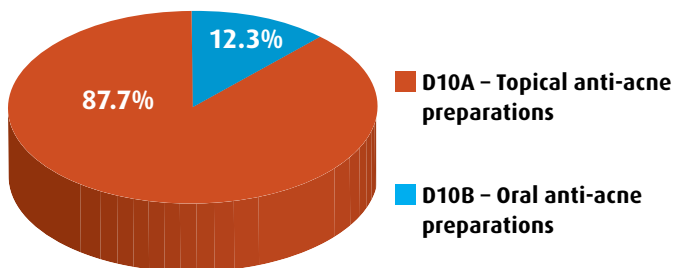
Moving forward, there is more work to be done on the effects of laser therapy and blue/red-light therapy, which was developed in 2000. However, much progress has been made in developing treatments for the scarring caused by acne. All of these are categorised under the banner of cosmetic treatment, as such problems are seen as non-essential and so have to be funded by the individual, in general. Treatments range from dermabrasion for mild to moderate conditions to laser treatment, punch techniques and subcision used to treat rolling scars.

The Author

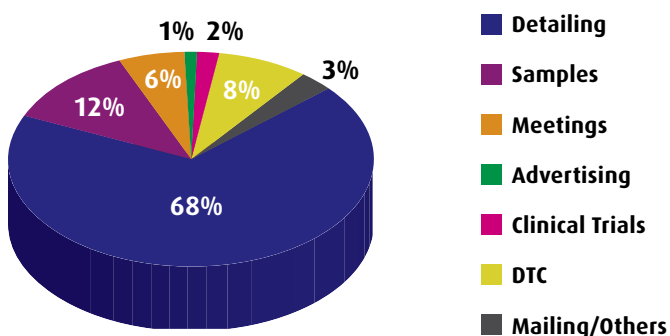
Catriona Williams is director at talkhealth. More information at www.talkacne.com and www.talkhealthpartnership.com



SPENDING BY THERAPY AREA



ACNE SPENDING BY CHANNEL



Source for all figures: Cegehim Strategic Data Promotion Database MAT Q1 2011