



Acne Treatment in London



PDT treatment for Acne

Acne is a chronic skin condition that affects all young people and can persist into adult life. It causes spots to develop, usually on the face, back and chest. It is thought to arise from increased levels of sex hormones around puberty which cause the sebaceous glands to enlarge. This leads to increased levels of sebum production which block the skin pores leading to black heads, then to acne pimples or pustules and follicular rupture.

It is characterised by spots which range from comedones (blackheads and whiteheads) which are often mild, to pus-filled spots (pustules) and cysts which be severe. Most adolescents will have a few spots on the face, neck, back and chest, but for some it will cause more significant problems that lead to scarring and a loss of self-confidence.

What causes acne?

Our skin has tiny grease glands called sebaceous glands near its surface. These glands are attached to hair follicles, small holes in our skin out of which single hairs grow. The sebaceous glands lubricate the hair and stop the skin drying out by producing an oily substance called sebum.

Grease production by the skin is controlled by the levels of male sex hormone testosterone, which is present in both men and women. In individuals with acne the levels of testosterone are either elevated or the sebaceous glands of people are overly sensitive to normal blood levels of testosterone. These cause the glands to produce an excess of oil.

The excess sebum mixes with dead skin cells and both substances form a plug in the follicle. If the plugged follicle is closed to the surface of the skin, it will bulge outwards, creating a whitehead. Alternatively, the plugged follicle can be open to the skin, creating a blackhead. In people prone to acne, the environment is created for comedones to become contaminated and infected by normally harmless bacteria (known as *Propionibacterium acnes*) that live on the skin, causing papules, pustules, nodules or cysts.

Acne is known to run in families. If both your parents had acne, it is likely that you will also have acne. If one or both of your parents had adult acne, you are more likely to get adult acne too. Hormonal changes, such as those that occur during the menstrual cycle or pregnancy, can also lead to episodes of acne in women.

Types of spots

Acne causes skin lesions (damaged tissue) that are commonly referred to as spots.

There are six main types of spot caused by acne:

- **Blackheads** are small black or yellowish bumps that develop on the skin
- **Whiteheads** have a similar appearance to blackheads but they can be firmer with a white centre, and do not open onto the surface of the skin
- **Papules** are small red bumps that may feel tender or sore
- **Pustules** are similar to papules but have a white tip in the centre that is caused by a build-up of pus
- **Nodules** are large hard lumps that build up beneath the surface of the skin and are usually painful
- **Cysts** are the most serious type of spot caused by acne. They are large, pus-filled lumps that look similar to boils

The last two are severe acne and carry the greatest risk of scarring if they are not properly treated

Treatments

If you just have a few comedones you should be able to treat them successfully with gels or creams (topical treatments) that contain benzoyl peroxide. These can be obtained from your pharmacist.

If your acne is severe or does not respond to over-the-counter products then we can help you.

We offer an initial consultation where we will discuss your condition and your lifestyle with you. Once a diagnosis is made we will build a holistic treatment plan for you. This will consist of one or more of the following:

- Topical treatments - applied directly to the skin
- Antibiotics - tablets taken by mouth
- Oral contraceptive pills

- Isotretinoin capsules
 - Laser and light based therapies (see PDT below)
 - Chemical peels and microdermabrasion
 - Treatment for acne scarring
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Photodynamic Therapy (PDT)

PDT can be effective in patients in certain circumstances:

- Those with recalcitrant acne, the most difficult type
- Those with inflammatory acne, including papular, pustular and nodular acne
- Those with nodulo-cystic acne that has failed to respond to other treatments

We use the Pulsed Dye 585nm Laser. It gets its name from the use of a liquid dye as the lasing media. It is designed to deliver short bursts of light that last only a fraction of a second and they effectively remove birthmarks and other red blemishes on the skin. Low power PDLs is used to improve the appearance of acne scarring in three ways: by killing the bacteria which cause the condition; secondly, by stimulating new collagen growth thus improving scarring; and thirdly, by causing selective damage to the sebaceous gland, thus reducing sebum (grease) production in the skin.

PDT usually requires between two and five treatments, two to four weeks apart. The treatment consists of applying a topical photosensitiser 5-aminolevulinic acid cream (5-ALA) for two to three hours and then continuous wave red LED light for 10-15 minutes.

When used to treat acne the PDL is usually administered by your Dermatologist or Dermatology nurse monthly. It can be used alone or in combination with chemical peels to reduce the comedones that cause the acne and as well helping with the acne scarring.

The treatment is painful and patients will need to avoid sunlight for 36 hours. Your skin will go bright red and peel, so the treatment is more suitable for young adults than teenagers. People with darker skin types, with Mediterranean or Asian skin types, will get some post inflammatory hyper-pigmentation lasting three months. While effective, PDT is expensive treatment and requires significant recovery time. However, we think these are a small price to pay for the improved quality of life.

Acne scarring

Severe acne can result in scarring when the most serious types of spots - nodules and cysts - burst and damage nearby skin. Scarring can also result from picking or squeezing your spots, so it is important not to do this.

There are three main types of acne scars:

- **ice pick scars: the skin looks like it has been** punctured with a sharp object
- **rolling scars:** the surface of the skin has a rolling and uneven appearance caused by bands of scar tissue formed underneath
- **boxcar scars** – round or oval depressions, or craters, in the skin

Treatments for Acne scarring

Radiofrequency

State of the art radiofrequency rejuvenation.

The Fractionated Radiofrequency ([FRF](#)) is a non-laser, non-light fractional device. Its energy source is radiofrequency, which effectively delivers a safe amount of heat energy to your skin. Its advantage is that it can dramatically improve your skin tone, wrinkles and scars in less time than traditional treatments. There is an increase in new collagen formation, skin tightening and overall rejuvenation.

A full-face can be completed in approximately 15 to 20 minutes. During treatment you will feel a warm, prickly sensation as energy enters your skin. A pink or red sunburn appearance is common afterwards. Topical anaesthetic ointments and cooling are used to reduce any discomfort during treatment and this subsides within a few hours. There is little downtime with the FRF: by the following day you can wear make-up.

Normally we would recommend one to three sessions at four to six week intervals, but acne scarring may need more. Results will usually start to show after four weeks. We will discuss this with you as part of your holistic treatment plan.

Useful websites

www.acne.org

www.nhs.uk/conditions/Acne/Pages/Introduction.aspx