

ACNE

Acne is the most common skin disorder seen by doctors. It will affect almost every one of us at some time in our lives. Teenagers are the ones who get it most often and if it is really bad it can lead to sufferers becoming depressed, which can lead to withdrawing from friends and performing poorly at school or at work.

The exact cause of acne is unknown, but some factors are considered important; when the skin surface and its pores are blocked, pores are described as being occluded. The factors that may cause occlusion include some cosmetics, oils, grease, and hairsprays. Hats, helmets and pads used in sports may also contribute to this problem as can humidity, sweating and the prolonged effect of contact with damp clothing.

What Causes Acne ?

- Acne is a visible end result of hormonal, bacterial and inflammatory disturbances that take place at the level of the oil pore (pilosebaceous follicle):



- As the process advances, greater amounts of oil may be produced within the sebaceous glands, though the change in composition and quality of the oil may be more important than the quantity. The scale produced on the inside walls of the hair follicle become stickier and it builds up and blocks the pore. This shows up as whiteheads and blackheads (comedones).
- The acne bacteria (*Propionibacterium Acnes*) grow and multiply in the retained oil. The sebum acts as a nutrition source for the bacteria, which in turn releases chemicals within the pore. These alert and attract white cells from the blood and that is what leads to inflammation. On the skin, the inflammation is seen as pimples or zits (papules and pustules).
- As these inflamed hair follicles (pores) and glands enlarge, the surrounding skin also becomes inflamed and may lead to even larger lumps and cysts (also called nodules).

- Inflammation may damage the cells that make collagen. Less collagen production causes thinning of the skin, which is seen as depressed scars. Occasionally, collagen production will increase, which then causes the scars to become thickened.

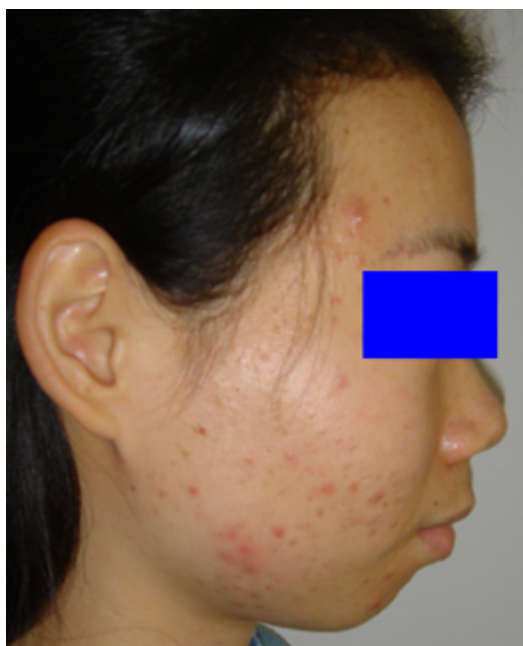
For acne and actinic skin damage and also damage of the skin due to ageing, we use a treatment that involves the loan of a light delivering blue light (415 nanometres) and red light (660 nanometres), together with a cream. The cream is placed on the damaged areas of skin, either aged or damaged skin due to sun, or on the areas affected by acne, after having used a skin cleanser. The patient then sits in front of the light box for 15 minutes. This is repeated daily for 12 weeks.

This treatment combines phototherapy (which has been proven in a study to help these skin conditions) with photodynamic therapy and a photosensitive skin cream. The photodynamic agent kills the acne bacteria (*Propionobacterium Acnes*).

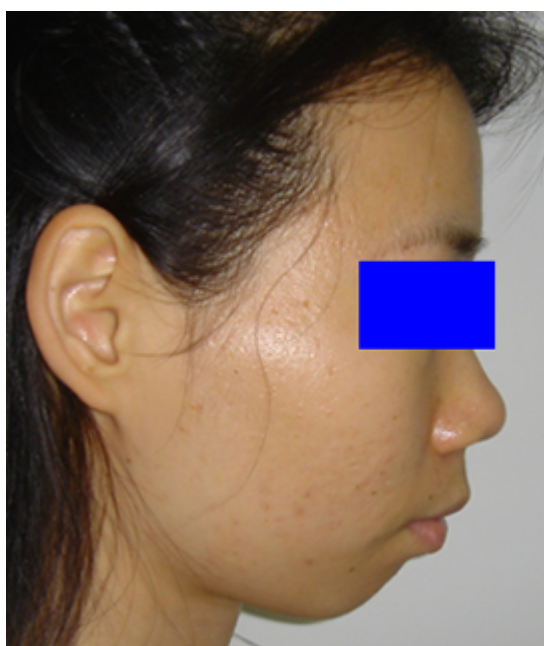
According to studies there is a 60% chance of obtaining significant improvement, which in acne involves resolution of the skin lesions and in actinic damage and ageing skin, a more youthful appearance. Generally speaking, this treatment needs to be repeated every 18 months to 2 years. The cost of this treatment including the loan of the light box and the cream, is £600. £150 will be reimbursed to the patient on the return of the light box and having checked its working condition.

Evidence to support this comes from: Phototherapy with blue (415nm) and red (660nm) light, in the Treatment of Acne Vulgaris. Papageorgiou, P, Katsambas & Chu, A. British Journal of Dermatology 2000 142: 973-978.

Photodynamic therapy can be used to reduce lines and wrinkles in the skin; it can also reduce pore size, redness and blushing, age spots and sun damage.



Acne case before photosensitive skin cream and light treatment



Same patient following treatment with photosensitive skin cream and light treatment